98TH CONGRESS
2d Session

HOUSE OF REPRESENTATIVES

REPT. 98-752
Part 2

COMPUTER LITERACY ACT OF 1983

AUGUST 15, 1984.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. FUQUA, from the Committee on Science and Technology, submitted the following

REPORT

together with

ADDITIONAL VIEWS

[To accompany H.R. 3750 which on August 3, 1983, was referred jointly to the Committee on Education and Labor and the Committee on Science and Technology]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science and Technology, to whom was referred the bill (H.R. 3750) to provide assistance to local educational agencies and institutions of higher education to promote computer literacy among elementary and secondary school students and their teachers, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

The amendment strikes out all after the enacting clause of the bill and inserts a new text which appears in boldface roman type in the reported bill.

That this Act may be cited as the "Computer Literacy Act of 1983".

TITLE I—ACQUISITION OF COMPUTER HARDWARE

PURPOSES

SEC. 101. It is the purpose of this title to authorize assistance to local educational agencies for the acquisition of computer hardware for use in school classrooms in order to promote student competence in the operation and use of new technologies, and thereby to improve students' academic performance in both technical and other fields.

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DEFINITIONS

SEC. 102. For purposes of this title—

(1) the term "Secretary" means the Secretary of Education;

(2) the term "local educational agency" has the meaning provided in section 198(a)(10) of the Elementary and Secondary Education Act of 1965;

(3) the term "State educational agency" has the meaning provided in section 198(a)(17) of such Act;

(4) the term "average daily attendance" has the meaning provided in section 198(a)(1) of such Act;

(5)(A) the term "computer hardware" means—

(i) a data processor which (I) has a random access memory capacity of at least 64,000 bytes, and (II) is or can be connected with one or more devices for interaction with users and for visual display;

(ii) in connection with such a data processor (I) one or more such devices, and (II) one or more mass storage devices; and

(iii) any equipment necessary (I) for the installation of equipment described in clauses (i) and (ii), or (II) for interconnection with communication networks; and

(B) the number of "units" of computer hardware is determined by the number of individuals who can concurrently use the data processor through separate interactive devices; and

(6) the term "State" means each of the fifty States, the District of Columbia, Puerto Rico, Guam, American Samoa, the Virgin Islands, the Trust Territory of the Pacific Islands, and the Northern Mariana Islands.

ALLOCATION OF FUNDS

SEC. 103. (a)(1) From 5 per centum of the amount appropriated pursuant to section 107 for any fiscal year the Secretary shall allocate to each State educational agency an amount for monitoring and enforcement which bears the same ratio to such 5 per centum as the amount allocated to the local educational agencies in that State under paragraph (2) for such fiscal year bears to the sum of the amount allocated to local educational agencies in all the States under such paragraph for such fiscal year.

(2) From the remainder of the amount appropriated pursuant to section 107 for any fiscal year the Secretary shall allocate to each eligible local educational agency an amount which bears the same ratio to such remainder as the number of children aged five to seventeen, inclusive in the school district of such local educational agency bears to the sum of such children in the school districts of all local educational agencies.

(b) Notwithstanding subsection (a)(2), the allocation of any local educational agency shall be reduced to the extent that assistance under this title has been or would be in excess of the amount necessary for such agency to acquire one unit of computer hardware for each thirty children in average daily attendance in the schools of such agency.

LOCAL APPLICATION FOR FUNDS

SEC. 104. (a)(1) A local educational agency shall be eligible for an allocation under section 103 if it has on file with the State educational agency a current application, approved by the State educational agency, describing the computer hardware procurement program to be conducted with assistance provided under this title. Such application shall contain—

(A) assurances that the local educational agency will allocate funds among the schools within its district so that—

(i) funds are provided first to those schools with the least computer hardware units per student;

(ii) funds are not provided to any school after such school has the equivalent of one unit of computer hardware for each thirty children in average daily attendance at such school;

(B) an identification of the computer hardware which are already available in the schools of such agency, a specification of the computer hardware to be acquired with funds provided under this title during the next funding period, and assurances that the acquisition cost of such hardware will be reasonable and in accordance with such guidelines as may be prescribed by the Secretary by regulation; and

(C) describe the programs and procedures which the local educational agency has developed to ensure the participation of parents in the establishment of its

computer hardware acquisition program and in the development and implementation of a curriculum for the use of such hardware.

(2) Such an application may be amended at any time to describe changes in or additions to the activities originally set forth in the application.

(b) An application or amendment thereto shall be approved by the State educational agency unless such agency determines that the application does not provide for the use of such funds in a manner which meets the requirements of this title or is inconsistent with such requirements as the Secretary may prescribe by regulation. No such determination shall be made except after notice and opportunity for a hearing is given to the applicant.

STATE RESPONSIBILITIES

SEC. 105. (a) Each State which desires to have its local educational agencies qualify for assistance under this title shall have on file with the Secretary an application submitted by its State educational agency. Each such application shall contain (1) satisfactory assurances that the State educational agency will comply with the requirements of this section; and (2) such information as the Secretary considers necessary to determine whether such assurances will be carried out.

(b) A State educational agency shall not finally disapprove, in whole or in part, the application of any local educational agency under section 104 without first affording such agency reasonable notice and opportunity for a hearing.

(c) Each State educational agency shall—

(1) adopt standards, consistent with minimum standards prescribed by the Secretary, for monitoring, with the funds provided under section 103(a)(1), the effectiveness of computer hardware procurement programs assisted under this title;

(2) adopt written procedures for receiving complaints regarding such programs;

(3) establish procedures for notifying the Secretary of any failure by a local educational agency to comply with this title, regulations prescribed thereunder, or any provision in its application; and

(4) make provision for audits of expenditures of funds received under this title to determine, at a minimum, the fiscal integrity of grant and subgrant financial transactions and reports, and compliance with applicable statutes, regulations, and terms and conditions of the grant or subgrant.

(d) Each State educational agency shall submit, at such times and in such detail as the Secretary may require, such reports as may be necessary to enable the Secretary to carry out this title, and shall keep such records and afford such access thereto, as the Secretary may require.

PARTICIPATION OF CHILDREN FROM PRIVATE SCHOOLS

SEC. 106. (a) To the extent consistent with the number of children in the school district of the local educational agency who are enrolled in private elementary and secondary schools, such agency shall, after consultation with appropriate private school representatives, provide for the benefit of such children in such schools secular, neutral, and nonideological materials and equipment. Expenditures pursuant to this subsection for children in private schools shall be equal (taking into account the number of children to be served and the needs of such children) to expenditures for children enrolled in the public schools of such agency. The control of funds provided under this Act and title to such materials and equipment shall be in a public agency, and a public agency shall administer such funds, materials and equipment.

(b) If by reason of any provision of law a local educational agency is prohibited from providing for the participation of children from private schools as required by subsection (a), or if the Secretary determines that a local educational agency has substantially failed or is unwilling to provide for such participation on an equitable basis, the Secretary shall waive such requirements and shall arrange for the provision of services to such children, which shall be subject to the requirements of this section. Such waivers shall be subject to consultation, withholding, notice, and judicial review in accordance with section 586(e)(2), (f), (g), and (h) of the Education Consolidation and Improvement Act of 1981.

AUTHORIZATION OF APPROPRIATIONS

SEC. 107. There are authorized to be appropriated to carry out this title such sums as may be necessary for each of the fiscal years 1985 through 1987.

TITLE II—TEACHER TRAINING INSTITUTES

NATIONAL SCIENCE FOUNDATION PROGRAM

SEC. 201. (a) From the amount appropriated pursuant to section 203 for any fiscal year, the National Science Foundation shall, with the cooperation of those Federal agencies engaged in similar activities, such as the Department of Defense, Department of Education, and any other appropriate agency, arrange, through grants to or contracts with professional educational, scientific, or engineering organizations, science museums, regional science education centers, State and local educational agencies, and institutions of higher education (including community colleges), for the development and operation by such entities of short-term or regular session institutes for advanced study to improve the qualifications of individuals who are engaged in or preparing to engage in the teaching, or supervising or training of teachers, of the operation and use of new and evolving technologies.

(b) In making grants and contracts under subsection (a), the National Science Foundation shall give special consideration to institutes training teachers, or supervisors or trainers of teachers, serving or preparing to serve in elementary and secondary schools enrolling substantial numbers of culturally, economically, socially, and educationally handicapped youth or in programs for children of limited English language proficiency. Applications for such training programs shall indicate that a portion of the funds for the training program will be used to instruct enrollees in methods to ensure equal access to and the use of the computer by students from underserved groups, including female students.

STIPENDS

SEC. 202. Each individual who attends an institute operated under the provisions of this title shall be eligible (after application therefor) to receive a stipend at the rate of $275 per week for the period of attendance at such institute.

AUTHORIZATION OF APPROPRIATIONS

SEC. 203. There are authorized to be appropriated to carry out this title $20,000,000 for each of the fiscal years 1985 through 1994.

TITLE III—EVALUATIONS, DISSEMINATION, AND INSTRUCTIONAL MODELS

INTERAGENCY PROGRAM

SEC. 301. (a) For the purpose of providing advice and technical assistance to State and local educational agencies on the expenditure of funds under title I of this Act and on the acquisition of suitable computer software, the National Institute of Education and the National Science Foundation, in accordance with an interagency agreement between such Institute and such Foundation, shall provide for—

(1) the evaluation of available computer hardware and software in terms of its usefulness in the classroom;

(2) the dissemination of the results of such evaluation.

Where appropriate, the evaluation shall include an evaluation of the usefulness of hardware and software to serve the special needs of the groups described in section 201(b) and of the extent to which the software promotes use by students of both sexes.

(b) The Institute and the Foundation shall carry out the functions described in paragraphs (1) and (2) of subsection (a) under grants to or contracts with non-Federal agencies and private nonprofit institutions or organizations made with funds appropriated under subsection (c).

(c) There are authorized to be appropriated to carry out this section $1,000,000 to the National Science Foundation and $1,000,000 to the National Institute of Education for each of the fiscal years 1985 through 1994.

COMPUTER INSTRUCTION MODELS

SEC. 302. (a) The National Science Foundation shall, through grants to or contracts with professional educational, scientific, or engineering organizations, science museums, regional science education centers, public television, State and local educational agencies, and institutions of higher education (including community colleges), conduct, assist, and foster research and experimentation on, and dissemination of, models of instruction in the operation and use of computers, educational computer software, and curriculum materials. In selecting such entities for such grants or contracts, the Foundation shall give priority to those proposals—

(1) prepared with the active and broad community involvement of such groups as parents, teachers, school boards and administrators, and local business;

(2) which propose the establishment of model training programs for adults;

(3) which would, to the extent practicable, take advantage of state-of-the-art development in computer and software design;

(4) which would—

(A) identify and develop model computer educational software and model curriculum materials providing instruction in the use of computers; and

(B) make such software and materials available to computer software producers and distributors, teachers, and school administrators;

(5) which would—

(A) identify and develop model computer educational software and model curriculum materials designed to increase access, participation, and achievement of historically underserved students, including minorities, women, handicapped, limited English proficient, and economically disadvantaged individuals in the use of computers; and

(B) make such software and materials available to computer software producers and distributors, teachers, and school administrators;

(6) which would develop teacher training materials (including, but not limited to, computer programs, films, slides, pamphlets, audio and video cassettes, and demonstration computer programs) which—

(A) instruct educators about personal computers, computer programming, and the development of educational software, facilitate greater understanding of computers, and assist educators in making determinations regarding the allocation of financial and personal resources for education involving computers; and

(B) provide special assistance to educators to assure that they are prepared to serve all segments of the population, including minorities, women, handicapped, limited English proficient, and economically disadvantaged individuals;

(7) would conduct programs demonstrating the various educational uses of computers including, but not limited to—

(A) model programs using as many as one computer for every four students in a classroom;

(B) the establishment of a laboratory using computers to simulate live experiments;

(C) the establishment of a computer library that permits students to borrow personal computers for use outside the classroom; and

(D) a laboratory to exhibit examples of personal computer systems and educational software materials to enable educators to examine the operation of such systems and materials;

(8) which would monitor developments in computer technology, including (but not limited to) microcomputers, video disc systems, and intercommunication among users of personal computers, and disseminate to educators information regarding such developments and their possible application in education;

(9) which would establish a mechanism to inform the computer industry of the computer needs of the Nation's educational system and to receive from the computer industry information regarding recent developments in the field;

(10) which would undertake any studies requested by Congress or Federal agencies relating to the educational uses of computer technology, and assist in identifying areas in which Federal funding might accelerate the educational impact of emerging computer technologies;

(11) which would assist interested local libraries, to the extent practicable, in establishing programs to provide personal computers and video disc systems to the public; or

(12) which utilize, to the extent practicable, existing computer communications and education networks and laboratories.

(b) Funds available under a grant or contract pursuant to this section may be used for the acquisition of computer hardware and software.

(c) The Director of the National Science Foundation shall report to the Congress annually on the results of research and experimentation performed with funds made available under this section. The Director, in conjunction with the National Institute of Education, shall take such steps as may be necessary to disseminate information concerning such results to local educational agencies.

(d) There are authorized to be appropriated to carry out this section $12,000,000 for each of the fiscal years 1985 through 1994. The authority to enter into contracts under this section shall be subject to the availability of appropriations therefor.

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I. PURPOSE OF THE BILL

The purpose of the bill is to promote the use of computer technologies in the schools to facilitate student and teacher use of computers and to study and enhance the educational uses of computer technologies. The bill addresses these priorities by: (1) authorizing grants to local school districts, particularly in poor areas, to purchase computers; (2) authorizing teacher training institutes to acquaint teachers to educational computer use; and (3) authorizing a grants program for the evaluation and dissemination of information on educational computer hardware and software, as well as basic research into computer models of instruction.

II. BACKGROUND AND NEED FOR THE LEGISLATION

The Committee on Science and Technology has been aware for many years that the new computer technologies would profoundly influence every sector of the American economy, including our educational system. The potential of the technologies to reshape education can be likened to the resulting educational impact of the printing press, which was developed over five centuries ago. However, the success and appropriate use of computer technology in education will depend upon the availability of computers in the classroom, the numbers of motivated and knowledgeable teachers, and careful and continuing research.

As greater numbers of schools incorporate computers into their curriculum, evidence suggests that a widening gap between schools in more affluent areas and those in poorer areas is developing. A survey conducted in January 1983 by Johns Hopkins Center for Social Organization of Schools, found that 70 percent of the schools in affluent areas had at least one microcomputer, while only 40 percent of the schools in poorer areas were so equipped. Also, a significant difference in the quality of computers, as well as software, teacher training, and computer use was found at the poorer schools. Although this disparity may simply reflect inequities which already exist between rich and poor schools, technology should not be allowed to exacerbate this problem; particularly as the United States enters the "information age". Title I of this bill is drafted to help alleviate this problem by providing funds for the purchase of hardware. Funds would flow first to those schools with the greatest need.

For computers to reach their full potential within the educational system, teachers must understand and accept the technology's potentials and limitations. Teachers, presently in our school systems, need to be instructed and, in some cases, retrained in the use of the technology in their classrooms. College curriculum should expose future teachers to the educational uses and limitations of these technologies. Title II of this bill authorizes teacher training institutes to instruct teachers in the use of computers. Through this program, administered by the National Science Foundation (NSF), institutes would be offered by State and local educational agencies, institutions of higher education, as well as private concerns such as educational, scientific and engineering organizations and science museums.

At the present time, educational computer use is in its infancy. To continue to develop and realize the possible uses of computers in education, continuing research must be performed. Title III of this bill authorizes a research program, administered by the NSF to develop educational software and computer instructional models. Also, a grants program, coordinated through the NSF and the National Institute of Education (NIE), for the evaluation and dissemination of information on current educational computer hardware and software is authorized. It is expected that these evaluations will facilitate the decisions educators and school administrators must make about computers in the classroom.

III. SECTIONAL ANALYSIS OF THE BILL, AS AMENDED

Title I—Acquisition of computer hardware

Title I authorizes the Department of Education to make grants to local school districts for the purchase of computer hardware. Funds are allocated to those schools with the fewest number of computer hardware units per student. When the ratio of one unit of computer hardware to every thirty students is reached, a local educational agency may not apply for more funds under this program.

All of the changes that the Committee on Education and Labor made to Title I have been incorporated into the bill reported by the Committee on Science and Technology. These changes specify that from funds allocated under this title, local educational agencies are to provide secular, neutral, and nonideological materials and equipment for students in private schools. The Committee on Education and Labor also changed the authorization from $300,000,000 for each of the fiscal years 1984 through 1993, to such sums as may be necessary for each of the fiscal years 1985 through 1987.

Further, the Committee on Science and Technology did consider changes to Section 102 of Title I which includes the computer hardware definition. Because of the technical nature of the definition, the Committee considered this section open for debate and amendment. The Committee amended the definition of computer hardware to expand the types of machines available for purchase under Title I—the hardware acquisition portion of H.R. 3750.

Title II—Teacher training institutes

Title II authorizes funding for teacher training institutes to be arranged by the NSF through grants and contracts to other organizations.

The Committee amended this title to allow profit-making organizations to receive grants for teacher training institutes. Language was included which allows NSF to coordinate this program with other Federal agencies involved in similar efforts, such as the Department of Defense and the Department of Education. Also, a stipulation, requiring that the teachers attending the institutes be instructed on methods to ensure equal access and use of computers by students from underserved groups, including female students, was placed on the institute applications. The authorization period for this title was changed from fiscal year 1984 through fiscal year 1993, to fiscal year 1985 through fiscal year 1994.

The bill reported by the Committee on Science and Technology does not reflect the changes made by the Committee on Education and Labor. In particular, the Committee on Education and Labor changed the authorization period to fiscal year 1995 through fiscal year 1987 and the authorization amount to such sums as may be necessary. The Committee on Science and Technology changed the authorization period as stated above, and retained the $20,000,000 authorization amount for each fiscal year.

Title III—Evaluation, dissemination, and instructional models

Section 301 provides funds for contracts and grants to be given for dissemination of information on and evaluation of existing educational computer software. The funds are administered through an interagency agreement between the NSF and the NIE.

Title III of this bill reflects some of the changes made by the Committee on Education and Labor. These changes incorporated the research responsibilities, placed in National Centers for Personal Computers in Education by H.R. 1134, into the NSF program in Section 302 of H.R. 3750. Research activities, such as the development of model computer software, curricula, teacher training materials, and demonstration projects, were integrated into the NSF program, as well as the monitoring of developments in computer technology applicable to education and the promoting of greater communication between educators, the computer industry, and the Federal Government.

However, the Committee on Science and Technology removed, from Section 302 of H.R. 3750, the priorities given to grants which utilize the National Institute of Education regional laboratories, or Federal computer communication and education networks. The Committee on Science and Technology also did not adopt the change the Committee on Education and Labor made to the authorization period. This change amended the authorization period from fiscal year 1984 through fiscal year 1993, to fiscal year 1985 through fiscal year 1987. The authorization period in the bill reported by the Committee on Science and Technology is fiscal year 1985 through fiscal year 1994.

Originally, the bill specified that NSF and NIE should conduct the evaluations of software and disseminate the results of those

evaluations. This was considered inappropriate to and inconsistent with the Federal Government's role in education. The bill now provides a $2 million program, over the next 10 years, coordinated by NSF and NIE to grant funds to non-profit organizations and institutions and non-Federal agencies to conduct the evaluations of the computer hardware and software and disseminate the results. Language requiring the evaluations to consider the usefulness of the hardware and software in serving the special needs of underserved groups, was also included.

Section 302 provides funds through the NSF for research and development of model educational computer software. The Committee amended this section to allow profit-making organizations to receive grants from the NSF program. Language was also added to give priority to proposals which would develop model instructional software aimed specifically at meeting the needs of historically underrepresented groups. $12 million per fiscal year for 10 years starting in fiscal year 1985 has been provided for the NSF educational software research program.

IV. COMMITTEE VIEWS

Title I: Acquisition of computer hardware

Description

Title I authorizes the Department of Education to make grants to local school districts for the purchase of computer hardware. Funds are allocated to those schools with the fewest number of computer hardware units per student. When the ratio of one computer hardware unit to every thirty students is reached, a local educational agency may not apply for more funds under this program. Private schools are allowed to participate in this program. A computer hardware unit can be either a personal computer or access to a larger time-sharing computer system.

Views

The Committee took action on those matters properly under its jurisdiction, and worked with the Committee on Education and Labor to assure that these changes did not impair the changes it had made to other sections of Title I. Title I describes a Department of Education program, which clearly falls under the jurisdiction of the Committee on Education and Labor. The Committee on Science and Technology's reported bill includes the changes the Committee on Education and Labor made to Title I. The only action the Committee on Science and Technology took in this title concerns the technical definition of computer hardware.

The Committee intends that the schools participating in the Department of Education program have a range of options for the development of their educational computer uses. Thus, the computer hardware definition has been expanded to include multi-user data processors as well as single-user data processors. In so doing, the Committee expects "devices for interaction with users" and "interactive devices" to define devices which accept and originate data, including but not limited to, remote terminals connected with a multi-user data processor, keyboards and/or monitors which are in-

separable from a single-user data processor, or other arrangements for interacting with the single or multi-user data processor.

The Committee believes that the current state of computer hardware available for school use is considerably different from even a year ago. Single and multi-user computer prices have decreased drastically. One reason for the price reduction is that computer memory has become less expensive. Lower memory prices have allowed schools to purchase more powerful machines for the same price as they were paying only a year ago for considerably less powerful computers. The Committee believes, from communications with software and hardware developers and vendors, and teachers and school administrators, that the current state of computer hardware for schools requires a single user data processor with an internal memory capacity of at least 64,000 bytes of memory. (In the case of multi-user machines, the memory capacity stipulated in the bill is not applicable. The Committee intends that multi-user data processors be evaluated for performance based upon the intended educational uses of the participating school.) At this point, most software is written for machines with at least 64,000 bytes of memory. Further, the Committee expects the schools to use high-quality, interactive software for the classroom, which requires powerful machines with at least the memory capacity stipulated in the bill. This assures that schools will be receiving current computer hardware through this program.

The Committee added further language allowing computer network communication equipment to be purchased under this program. As school districts upgrade to more sophisticated computer instructional capabilities, communication between schools will allow for greater efficiency, more effective use, and sharing of those instructional capabilities.

The Committee also intends that all monies authorized under this Title should supplement present efforts, rather than supplant existing programs.

Title II: Teacher training institutes

Description

Title II authorizes funding for teacher training institutes to be arranged by the NSF through grants and contracts to various state, local, and private sector organizations.

Views

The Subcommittee on Science, Research and Technology heard testimony from witnesses at the June 5, 1984 hearing suggesting that allowing only non-profit organizations to receive program funds for the teacher training institutes, may undercut existing private sector efforts at teacher training. Many witnesses pointed to Apple Computer Corporation and Tandy Corporation as two companies already supplying computer training to school teachers. However, witnesses also commented that the private sector is unable to meet all of the teacher training needs, and that this program will begin to alleviate the problem of educating our present and future teachers in computer use.

The Committee also intends that all monies authorized under this Title should supplement present efforts, rather than supplant existing programs.

Title III: Evaluation, dissemination, and instructional models

Description

Section 301 provides funds for contracts and grants to be given to non-Federal agencies and non-profit organizations to conduct evaluations of existing educational computer software and disseminate the results of those evaluations to State and local educational agencies. The program is to be administered through an interagency agreement between NSF and NIE.

Section 302 provides funds through the NSF for a research and development grants program for research on model educational computer software. Grants are provided for researchers from organizations in the private, public, and business sectors, as well as priorities being set for funding specific types of proposals.

View

The Committee intends that the evaluation of educational software should entail the description of software characteristics which could assist teachers in making decisions about the usefulness of materials for the classroom. These characteristics include, but are not limited to: the grade levels for which the software is appropriate; the availability of additional supporting materials, such as workbooks, teacher handbooks, course descriptions, and visual aids; a description of the subject matter and specific concepts addressed through the software; the method of computer instruction, i.e., drill-and-practice or individualized instruction; the ability of the software to address special needs of underserved populations; and the computer hardware needed to run the software, including hardware/software compatibility and the amount of memory capacity needed for the software. The Committee does not intend the evaluation to constitute decisions about the educational goals addressed by the specific software, but instead to provide information which is useful for teachers and administrators when making decisions about hardware and software purchases for the classroom.

The Committee believes that a long-term and sustained research program is essential to the effective present and future use of computers in the classroom. The Committee does not believe that each student must learn computer programming or that traditional educational activities should be displaced by the computer. Instead, it is expected that the computer will be used to enhance and extend the education of our elementary and secondary school children. As witnesses testified at the Subcommittee hearing, the current understanding of the possible uses of computers in the classroom is limited. However, the potential for computers to effect the educational process is enormous. Federally funded projects, such as the development of the widely used language LOGO, demonstrate the opportunity for Federally supported basic research to successfully motivate private sector development of useful educational software.

Language has been included to give priority to those NSF program proposals which develop instructional models specifically

aimed at increasing the participation of historically underserved students, including minorities, women, handicapped, limited English proficient, and economically disadvantaged individuals. Growing evidence in patterns of computer use suggest that certain individuals and groups will be left behind unless some effort is made to address their special needs.

The Committee also intends that all monies authorized under this Title should supplement present efforts, rather than supplant existing programs.

V. LEGISLATIVE HISTORY

H.R. 3750 was introduced by Congressman Wirth and several other cosponsors on August 3, 1983. The bill was jointly referred to the Committee on Education and Labor and the Committee on Science and Technology. The Subcommittee on Elementary, Secondary, and Vocational Education conducted a hearing on this bill and related bills, H.R. 1134 and H.R. 4628, on May 1, 1984. The Subcommittee met in a markup session on May 3, 1984, and ordered the bill reported, as amended, to the full Committee. After discharging from further consideration the Subcommittees on Postsecondary Education and Select Education, the full Committee on Education and Labor met and ordered the bill reported, as amended, on May 8, by a vote of 21–2.

The Subcommittee on Science, Research and Technology of the Committee on Science and Technology, conducted a hearing on H.R. 3750 and H.R. 4628, on June 5, 1984. The Subcommittee met in a markup session on June 19, 1984, and ordered the bill reported, as amended, to the full Committee. The full Committee on Science and Technology met and ordered the bill reported, as amended, on August 8, 1984, by a voice vote, a quorum being present.

VI. INFLATION IMPACT OF THE BILL

In accordance with Rule XI, Clause 2(l)(3) of the Rules of the House of Representatives, this legislation is assessed to have no adverse inflationary effect on prices and costs in the operation of the national economy.

VII. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

Pursuant to Rule XI, Clause 2(l)(3) of the Rules of the House of Representatives, and under the authority of Rule X, Clause 2(b)(1) and Clause 3(f), the Committee's oversight findings and conclusions are reflected in the recommendations found in the present bill and report.

VIII. SUMMARY OF COMMITTEE ON GOVERNMENT OPERATIONS FINDINGS AND RECOMMENDATIONS

Pursuant to Rule X, Clause 2(b)(2), and Rule XI, Clause 2(l)(3) of the rules of the House of Representatives, no findings or recommendations have been submitted by the Committee on Government Operations for inclusion in this report.

IX. BUDGET ANALYSIS AND PROJECTION

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, August 9, 1984.

Hon. DON FUQUA,
Chairman, Committee on Science and Technology,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for H.R. 3750, the Computer Literacy Act of 1984, as ordered reported by the House Committee on Science and Technology on August 8, 1984.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

RUDOLPH G. PENNER.

X. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: H.R. 3750.
2. Bill title: Computer Literacy Act of 1984.
3. Bill status: As ordered reported by the House Committee on Science and Technology on August 8, 1984.
4. Bill purpose: The purpose of this bill is to establish a program to assist schools in acquiring computer hardware and to provide information and training in the operations and use of new technologies. This bill is subject to subsequent appropriations action.
5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1985	1986	1987	1988	1989
Computer acquisition:					
Estimated authorization levels	675	675	675		
Estimated outlays	338	675	675	337	
Teacher training:					
Authorization levels	20	20	20	20	20
Estimated outlays	10	20	20	20	20
Information dissemination and evaluation:					
Authorization level	2	2	2	2	2
Estimated outlays	2	2	2	2	2
Computer instruction grants:					
Authorization level	12	12	12	12	12
Estimated outlays	6	10	12	12	12
Total:					
Authorization levels	709	709	709	34	34
Estimated outlays	356	707	709	371	34

The costs of this bill would fall within budget function 250 and 500.

Basis of estimate

H.R. 3750 authorizes over the next three years the acquisition of one computer per every 30 students in attendance in public schools. The estimated authorization levels for equipment acquisition assumes that 1.3 million computers for the estimated 39 million ele-

mentary and secondary education students are purchased over a three-year period. The average cost per computer is $1,500. The estimate includes an additional 5 percent for State monitoring and enforcement as provided for in the bill.

The authorization levels for teacher training, evaluation and information dissemination, and the computer instruction grants are those specifically stated in the bill through 1994.

Estimated outlays assume full appropriation of authorized levels. The funds for computer acquisition and teacher training are assumed to be spent over two years. Outlays for the computer instruction grants reflect spending patterns of the NSF program.

6. Estimated cost to State and local governments: This bill does not require any State or local government matching funds.

7. Estimate comparison: None.

8. Previous CBO estimate: On May 14, 1984, CBO prepared an estimate on H.R. 3750 as ordered reported from the House Education and Labor Committee. That bill authorized the teacher training and information dissemination and evaluation at such sums through 1987 and did not include the computer instruction grants.

9. Estimate prepared by: Deborah Kalcevic; Daniel Koretz.

10. Estimate approved by: C. G. Nuckols (For James L. Blum, Assistant Director for Budget Analysis).

XI. COMMITTEE RECOMMENDATIONS

A quorum being present, on August 8, 1984, the Committee ordered favorably reported the bill, H.R. 3750, by voice vote and recommends its approval.

ADDITIONAL VIEWS OF JUDD GREGG ON H.R. 3750, THE COMPUTER LITERACY ACT OF 1984

Notwithstanding concern for the financial cost of the bill, I have expressed my support for the concepts and programs authorized in Title II and Title III of H.R. 3750, those areas of the legislation within the jurisdiction of this committee.

Title II and III of H.R. 3750 address two very important aspects in the educational process, that is assistance to teachers so that new and/or developing instructional methods can be assimilated into the school curriculum and secondly, a mechanism for the Federal Government to act, within its jurisdiction, to promote quality educational materials and research to advance the state of the art. H.R. 3750 does so in the field of computers.

Title II, recognizing the potential of the National Science Foundation to instill excellence in education, would authorize funding for teacher training institutes. It is the intention of the Committee that such efforts would compliment, not conflict, with those activities in the private sector, which are well oversubscribed. NSF, by nature of its relationships with undergraduate and graduate institutions, as well as its progress with industrial partnerships, can provide quality guidance to the teaching profession in sponsoring such training institutes. The Science and Engineering Education Directorate, offers a promising future for the encouragement of high quality computer oriented instruction of scientific, mathematical and technical concepts. I would strongly encourage NSF to recognize the potential of new technologies, which build upon the computer, and which have a potential for use in education.

Title III of the bill speaks to the role the Federal Government can take in research and development, as well as making available to the public that information.

There are some concerns which should be raised regarding this legislation and that of similar bills passed by the Congress regarding education. First, there is a fiscal reality which is unfortunately overlooked in Title I of this bill. Whereas no specific level of funding is recommended, one only needs to look at the legislative history of the bill to know that it is exorbitant. I intend to oppose this title on the Floor of the House at the appropriate time. Secondly, as raised in the Minority views of the Committee on Education and Labor, there is some conventional wisdom in noting that previous laws exist in the case of hardware and block grants. Thirdly, while the fate of H.R. 1310 was not known when the Education and Labor Committee worked on this legislation, it is now clear what version has gone forward.

Whereas H.R. 3750 would have more closely complimented the House version of H.R. 1310, the compatability with the Senate version is less clear. Therefore serious oversight by this Committee will be necessary to clarify the message Congress is sending to the

Foundation. For this reason the Minority urges the Committee to address the inconsistency in the authorization process in fiscal year 1986.

JUDD GREGG.

○

98TH CONGRESS
2d Session

HOUSE OF REPRESENTATIVES

REPT. 98-983
Part 1

UNIFORM SCIENCE AND TECHNOLOGY RESEARCH AND DEVELOPMENT UTILIZATION ACT

AUGUST 15, 1984.—Ordered to be printed

Mr. FUQUA, from the Committee on Science and Technology, submitted the following

REPORT

together with

ADDITIONAL VIEWS

[To accompany H.R. 5003 which on March 1, 1984, was referred jointly to the Committee on the Judiciary and the Committee on Science and Technology]

[Including cost estimate of the Congressional Budget Office]

[To accompany H.R. 5003]

The Committee on Science and Technology, to whom was referred the bill (H.R. 5003) to establish a uniform Federal system for management, protection, and utilization of the results of federally sponsored scientific and technological research and development, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

The amendment strikes out all after the enacting clause of the bill and inserts a new text which appears in italic type in the reported bill.

That this Act may be cited as the "Uniform Science and Technology Research and Development Utilization Act".

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TITLE I—POLICY

FINDINGS

SEC. 101. The Congress, recognizing the profound impact of science and technology, finds and declares that—

(1) the United States has recently experienced a decline in industrial innovation and productivity which adversely affects domestic productivity, the rate of economic growth, the level of employment, the balance of trade, and the attainment of other national goals;

(2) the national support of scientific and technological research and development is indispensable to sustained growth and economic stability, and it is in the national interest to maximize the benefits to the public for such investment;

(3) inventions resulting from Government-sponsored research and development constitute a valuable national resource which should be developed in a manner consistent with the public interest and the equities of the respective parties; and

(4) there is a need for the establishment and implementation of a flexible Government-wide policy to increase the utilization of the results of Government-sponsored research and development, and this policy should promote the progress of science and the useful arts, encourage the efficient commercial utilization of technological developments and discoveries, guarantee the protection of the public interest in the United States and foreign countries, and recognize the equities of the contracting parties.

TITLE II—IMPLEMENTATION

FUNCTIONS OF THE FEDERAL COORDINATING COUNCIL ON SCIENCE, ENGINEERING, AND TECHNOLOGY

SEC. 201. (a)(1) The Federal Coordinating Council for Science, Engineering, and Technology (established by section 401 of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6651) and reestablished by Executive Order 12039) (hereinafter in this section referred to as the "Council") shall make recommendations to the Director of the Office of Science and Technology Policy (or his designee) and to the Secretary with regard to uniform policies, guidelines, and practices to carry out the provisions of this Act.

(2) For the purpose of assuring effective management of Government-owned or funded inventions, the Secretary of Commerce shall chair a committee of the Council to formulate the recommendations required by this subsection. Such committee shall also include but not be limited to representatives of each Federal agency with a major research and development program. When adopted by the Director any such recommendations shall be transmitted to Federal agencies through appropriate channels, including those provided in section 202(6).

(b) In order to carry out the responsibilities set forth in subsection (a), the Council may—

(1) acquire data and reports from Federal agencies on the interpretation and implementation of this Act and related policies, regulations, and practices;

(2) review Federal agency implementation of the provisions of this Act;

(3) analyze, on a continuing basis, data acquired by the Council;

(4) consider problems and developments in the fields of inventions, patents, and matters connected therewith and the impact thereof on Government policy or uniform accommodation or implementation by Federal agencies; and

(5) publish annually a report on Council efforts, findings, and recommendations made under this section, which report shall include—

(A) relevant statistical data regarding the disposition of subject invention disclosures resulting from Government-sponsored research and development, including those inventions disclosed by small businesses and nonprofit organizations;

(B) any recommendations for changes in law to better achieve the purposes of this Act; and

(C) an analysis of Federal policies related to this Act.

FUNCTIONS OF THE SECRETARY OF COMMERCE

SEC. 202. For the purpose of assuring the effective management of Government-owned inventions, the Secretary—

(1) may assist Federal agency efforts to promote the licensing and utilization of Government-owned inventions;

(2) may assist Federal agencies in seeking and maintaining protection on inventions in foreign countries, including the payment of fees and costs connected therewith;

(3) may consult with and advise Federal agencies as to areas of science and technology research and development with potential for commercial utilization;

(4) may publish notification of all Government-owned inventions that are available for licensing or assignment;

(5) may evaluate inventions referred to him by Federal agencies, and patent applications filed thereon, in order to identify those inventions with the greatest commercial potential and to insure promotion and utilization by the public of inventions so identified; and

(6) may initiate regulations and revisions thereof which shall be promulgated by the Director of the Office of Management and Budget after full consideration of agency and public comments.

TITLE III—ALLOCATION OF RIGHTS

RIGHTS OF THE GOVERNMENT AND THE CONTRACTOR

SEC. 301. (a) Subject to subsection (c) and to section 303, each contractor may elect to retain worldwide title to any subject invention. Where not in violation of existing treaties or laws of the United States, a Federal agency may, at the time of contracting, limit or eliminate this right, place additional restrictions or conditions in the contract that go beyond those set forth in subsection (c), expand the rights of the Government to license or sublicense, or alter or eliminate the contractor's right under subsection (c)(7), but only if—

(1) it is determined by a Government authority which is authorized by statute or Executive order to conduct foreign intelligence or counterintelligence activities that this is necessary to protect the security of such activities;

(2) the contractor is not located in the United States or does not have a place of business located in the United States, is a foreign government, or is subject to the control of a foreign government;

(3) the contract is related to or associated with an international treaty, agreement, memorandum of understanding, or other arrangement with a foreign government including (but not limited to) agreements of cooperation in science and technology and military agreements related to weapons development or production, and it is determined by the agency that rights in the Government in any subject inventions beyond the license right provided in subsection (c)(3) are necessary for the agency to fulfill its obligations under the international treaty, agreement, memorandum of understanding, or arrangement;

(4) the agency determines, on a case by case basis, that there are exceptional circumstances requiring such action; or

(5) the contract includes the operation of a Government-owned, contractor-operated facility of the Department of Energy primarily dedicated to that Department's naval nuclear propulsion or weapons related programs; however, all contractual limitations under this subparagraph on the contractor's right to elect title to a subject invention are limited to inventions occurring under the above two programs of the Department of Energy.

(b) Each determination made by a Federal agency under subsection (a) shall be in writing, and copies of those made under subsections (a)(4) and (a)(5) shall be filed with the Federal Coordinating Council for Science, Engineering, and Technology. In the case of a determination under subsection (a)(4) or (a)(5), the statement shall in-

clude an analysis supporting the determination and justifying the limitations and conditions being imposed. If the contractor believes that a determination is contrary to the terms, policy, or objectives of this Act, or constitutes an abuse of discretion by the agency, the determination shall be subject to section 303(b). Whenever the Director of the Office of Management and Budget has determined that one or more Federal agencies are utilizing the authority of subsection (a)(4) or (a)(5) in a manner that is contrary to the terms, policy, or objectives of this Act, he may promulgate regulations under section 202(6) which establish policies, procedures, and guidelines describing classes of situations in which agencies may not utilize the provisions of subsection (a)(4) or (a)(5).

(c) In accordance with regulations which shall be promulgated under section 202(6), each contract under which the contractor may elect to retain title to a subject invention shall include a patent rights clause containing such provisions as may be necessary and appropriate to effectuate the following rights and requirements:

(1) The contractor shall disclose each subject invention to the contracting Federal agency within a reasonable time after it is made and the Government may receive title, upon request, to any subject invention not disclosed within such reasonable time.

(2) Unless the Government has acquired the right to title in accordance with subsection (a)—

(A) the contractor shall make a written election to retain title to the subject invention within a reasonable time after disclosure under paragraph (1);

(B) the Federal agency may consider and, with the consent of the contractor, grant requests for retention of rights by the inventor in any country in which the contractor has not elected title on such terms and conditions as may be deemed appropriate by the agency and subject to section 303;

(C) a contractor electing to retain title in any country to a subject invention shall file a patent application in the elected country within a reasonable time; and

(D) the Government may receive title to any subject invention in any countries in which the contractor or inventor has elected not to retain title or has failed to file a patent application in accordance with this paragraph.

(3) With respect to any subject invention to which a contractor elects to retain title, the Government shall have (in addition to any rights that have been taken under subsection (a))—

(A) a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced the subject invention throughout the world by or on behalf of the Government;

(B) if provided in the contract, such additional rights to sublicense any foreign government or international organization pursuant to any existing or future treaty or agreement; and

(C) the right to require the contractor, inventor, or assignee to license another person to practice a subject invention on reasonable terms if—

(i) such licensing is necessary to permit lawful commercial manufacture, use, or sale by a third party of a specified end item of a major, multiyear research and development project of the Department of Energy or the National Aeronautics and Space Administration and such subject invention was made during research and development activities directly related to that project;

(ii) a similar product or process is not commercially available as a reasonable substitute for the licensing; and

(iii) such right is specified in the contract.

(4) The Federal agency shall require, in accordance with regulations which shall be promulgated under section 202(6), at least one written report during the first 3 years after issuance of the patent to a contractor or inventor and may require other written reports on the efforts to obtain commercial utilization made by the contractor, inventor, licensee, or assignee with respect to any subject invention to which the contractor elects title pursuant to this section, except that any such report, as well as any information on utilization or efforts toward obtaining utilization obtained as part of a proceeding under section 303, shall be treated by the agency as a trade secret or as commercial or financial information obtained from a person and privileged or confidential and not subject to disclosure under section 552 of title 5, United States Code.

(5) The contractor or inventor, in the event a United States patent application is filed by it or on its behalf or by any assignee, shall include within the specification of such application and any patent issuing thereon a statement specify-

ing that the invention was made with Government support and that the Government has certain rights in the invention.

(6) After payment of patenting costs, licensing costs, payments to inventors, and other expenses, the balance of any royalties or income earned on subject inventions by the contractor operating a Government-owned contractor-operated facility (up to a total equal to 5 percent of that facility's annual budget), if the contractor elects to retain such funds, shall be used by such contractor for scientific research, development, and education consistent with the research and development mission and objectives of such facility including activities that increase the licensing potential of other inventions of the facility. Any additional royalties and income shall be returned to the Treasury. To the extent that it provides the most effective technology transfer, the licensing of the inventions involved shall be administered by contractor employees on location at the facility.

(7) The contractor, in cases when it has the choice under subsection (a) to retain title to a subject invention but does not elect to retain title or is required to grant a license under section 303 (a)(2) or (a)(3), may retain a nonexclusive, royalty-free, paid-up, worldwide license (including the right to sublicense affiliates, subsidiaries, and existing licensees to whom the contractor is legally obligated to sublicense) in any subject invention to which the Government obtains title, which license shall be limited or revocable only to the extent necessary for the Government to grant an exclusive license; except that the contractor shall not be entitled to such a license if the contractor has willfully failed to disclose the subject invention.

(8) A transfer by the contractor of rights in any subject invention shall be subject to the rights of the Government provided by this section and sections 302, 303, and 304.

(9) The clause may impose any other administrative requirements which may be necessary to effectuate rights of the Government and the contractor as specified in this Act, to the extent not inconsistent with this Act.

WAIVER

SEC. 302. (a) In accordance with regulations which shall be promulgated under section 202(6), a Federal agency may, at any time, waive all or any part of the rights of the Government under sections 301 and 303 in any subject invention or class of subject inventions which are or may be made under a contract of the agency if the agency determines that the interests of the Government and the general public will be best served thereby, including but not limited to instances where—

(1) the contract involves cosponsored, cost-shared, or joint venture research or development and the contractor or other sponsor or joint venturer is required to make a substantial contribution of funds, facilities, personnel, data, or equipment to the work performed under the contract, or

(2) the conditions justifying acquisition of title by the Government under section 301(a) no longer exist or do not apply in the case of the subject invention.

(b) The Federal agency shall maintain a record, which shall be made public and periodically updated, of determinations made under subsection (a).

(c) In making determinations under subsection (a), the agency shall consider at least the following objectives:

(1) Encouraging the wide availability to the public of the benefits of Government-sponsored research and development in the shortest practicable time.

(2) Promoting the commercial utilization of inventions made under Government funding agreements.

(3) Encouraging participation by highly qualified private persons in Government-sponsored research and development programs.

(4) Fostering competition and preventing the creation or maintenance of situations inconsistent with the antitrust laws.

(d) When an agency waives all or part of its rights in an invention under subsection (a)(2), the contractor shall be permitted to take title subject to this section and sections 301(c), 303, and 304.

MARCH-IN RIGHTS AND NOTIFICATION OF AVAILABILITY FOR LICENSING

SEC. 303. (a) Where a contractor or inventor has elected to retain title to a subject invention under section 301 or 302, the Federal agency shall have the right, in accordance with regulations which shall be promulgated under section 202(6), and subject to the provisions of subsection (b), to require the contractor or his assignee or the inventor or his assignee to grant a nonexclusive, partially exclusive, or exclusive

license to a responsible applicant or applicants, upon terms reasonable under the circumstances, if the head of the agency (or his designee) determines that such action is necessary—

(1) because the contractor, inventor, assignee, or licensee has not taken, or is not expected to take within a reasonable time, effective steps to achieve the practical application of the subject invention;

(2) to alleviate serious health or safety needs which are not reasonably satisfied by the contractor, inventor, assignee, or licensee; or

(3) to meet requirements for public use specified by Federal regulation which are not reasonably satisfied by the contractor, inventor, assignee, or licensee.

(b)(1) A determination made pursuant to this section or section 301(a)(4) shall not be subject to the Contract Disputes Act (41 U.S.C. 601 et seq.).

(2) An administrative appeals procedure shall be established by regulations promulgated under section 202(6).

(3) Any contractor, inventor, assignee, or exclusive licensee adversely affected by a determination under this section or section 301(a)(4) may, at any time within sixty days after the determination is issued—

(A) file an appeal under the appeals procedure established pursuant to paragraph (2), or

(B) file a petition in the United States Claims Court which shall have jurisdiction to determine the matter de novo and to affirm, reverse, or modify, as appropriate, the determination of the Federal agency.

(4) In cases described in paragraphs (1) and (3) of subsection (a), the agency's determination shall be held in abeyance pending the exhaustion of any appeal or petition described in paragraph (3).

(c)(1) Minimum standards for the commercialization of inventions by contractors and inventors shall be established by regulations promulgated under section 202(6).

(2) If the head of an agency (or his designee) determines, on the basis of information contained in the report required to be filed with the agency by a contractor or inventor under section 301(c)(4), that such contractor or inventor has failed to meet the minimum standards prescribed pursuant to paragraph (1) and the invention has potential commercial value, such agency head (or designee) shall refer interested parties to the patent holder of such invention through the licensing program of such agency or the National Technology Information Service.

BACKGROUND RIGHTS

SEC. 304. (a) Nothing contained in this Act shall be construed to deprive the owner of any background patent of such rights as the owner may have under such patent.

(b) No contract shall contain a provision allowing a Federal agency to require the licensing to third parties of inventions owned by the contractor that are not subject inventions unless such provision has been approved, and a written justification has been signed, by the head of the agency (or his designee). Any such provision shall clearly state whether the licensing may be required in connection with the practice of a subject invention, a specifically identified work object, or both. The head of the agency may not delegate the authority to approve such provisions or to sign the justification required for such provisions to a program level lower than Assistant Secretary in the case of a Department or Assistant Administrator or comparable official in the case of any other agency.

(c) A Federal agency shall not require the licensing of third parties under any such provision unless the head of the agency (or his designee who is responsible for the program and who holds as a minimum the rank of Assistant Secretary, Assistant Administrator, or its equivalent) determines that the use of the invention by others is necessary for the practice of a subject invention or for use of a work object of the contract and that such action is necessary to achieve the practical application of the subject invention or work object. Any such determination shall be on the record after an opportunity for an agency hearing in which the contractor has the right to participate and the contractor shall be given prompt notification of the determination by certified or registered mail.

TITLE IV—MISCELLANEOUS

DEFINITIONS

SEC. 401. As used in this Act (other than in section 402)—

(1) the term "person" means any person as defined in section 1 of title 1, United States Code;

(2) the term "Government" means the Government of the United States of America;

(3) the term "Federal agency" means an Executive agency (as defined in section 105 of title 5, United States Code), and the military departments (as defined in section 102 of title 5, United States Code);

(4) the term "small business firm" means a small business concern as defined in section 2 of the Small Business Act (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration;

(5) the term "nonprofit organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 and exempt from taxation under section 501(a) of such Code, or any nonprofit, scientific, or educational organization qualified under a State nonprofit organization statute;

(6) the term "contract" means any contract, grant, or cooperative agreement entered into between a Federal agency (other than the Tennessee Valley Authority) and any person other than a small business firm or nonprofit organization where a purpose of the contract is the conduct of experimental, developmental, or research work; and such term includes any assignment, substitution of parties, or subcontract of any tier entered into or executed for the conduct of experimental, developmental, or research work in connection with the performance of that contract; but does not mean any work-for-others agreement or jointly sponsored research arrangement entered into between a private entity and the operator of a Government-owned contractor-operated facility;

(7) the term "contractor" means any person or entity (other than a Federal agency, nonprofit organization, or small business firm) which is a party to a contract;

(8) the term "Secretary" means the Secretary of Commerce;

(9) the term "Director" means the Director of the Office of Science and Technology Policy, or his designee;

(10) the term "invention" means any invention or discovery which is or may be patentable or otherwise protectable under title 35, United States Code, or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.);

(11) the term "subject invention" means any invention of a contractor conceived or first actually reduced to practice in the performance of work under a contract, except that in the case of a sexually propagated variety of plant the date of determination (as defined in section 41(d) of the Plant Variety Protection Act (7 U.S.C. 2401(d))) must also occur during the period of contract performance;

(12) the term "practical application" with respect to any invention means the manufacture (in the case of a composition or product), practice (in the case of a process or method), or operation (in the case of a machine or system) of such invention under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms or through reasonable licensing arrangements;

(13) the term "antitrust law" means the laws included within the definition of the term "antitrust laws" in section 1 of the Clayton Act (15 U.S.C. 12), as amended;

(14) the term "background patent" means a domestic patent covering an invention or a discovery (A) which is not a subject invention, (B) which is owned or controlled by the contractor at any time through completion of the contract, and (C) which the contractor but not the Government has the right to license to others without obligation to pay royalties thereon;

(15) the term "United States" includes the territories, possessions, and the District of Columbia;

(16) the term "inventor" with regard to a subject invention means a person who is or will be listed as an inventor on the patent for said invention when filed in the United States Patent and Trademark Office; and

(17) the term "Government-owned, contractor-operated facility" includes all federally funded research and development centers.

AMENDMENTS TO OTHER ACTS

SEC. 402. The following Acts are hereby amended as follows:

(1) Section 205(a) of the Act of August 14, 1946 (7 U.S.C. 1624(a); 60 Stat. 1090) is amended by striking out the last sentence.

(2) Section 501(c) of the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. 951(c); 83 Stat. 742) is amended by striking out the last sentence.

(3) Section 106(c) of the National Traffic and Motor Vehicle Safety Act of 1966 (15 U.S.C. 1395(c); 80 Stat. 721) is repealed.

(4) Section 12(a) of the National Science Foundation Act of 1950 (42 U.S.C. 1871(a); 82 Stat. 360) is repealed.

(5) Section 152 of the Atomic Energy Act of 1954 (42 U.S.C. 2182; 68 Stat. 943) is repealed; except that such section shall continue to be effective with respect to (A) any application for a patent in which the statement under oath referred to in such section has been filed or requested to be filed by the Commissioner of Patents and Trademarks prior to the effective date of this Act, and (B) any right retained by the Government under sections 301(a)(4) and (5) of this Act.

(6) The National Aeronautics and Space Act of 1958 (42 U.S.C. 2451 et seq.; 72 Stat. 426) is amended—

(A) by striking out section 305 (42 U.S.C. 2457); except that subsections (c), (d), and (e) of such section shall continue to be effective with respect to any application for patents in which the written statement referred to in subsection (c) of such section has been filed or requested to be filed by the Commissioner of Patents and Trademarks prior to the effective date of this Act;

(B) by striking out "(as defined by section 305)" in section 306(a) (42 U.S.C. 2458(a)), and by striking out "the Inventions and Contributions Board established under section 305 of this Act" in such section and inserting in lieu thereof "an Invention and Contributions Board which shall be established by the Administrator within the Administration";

(C) by adding at the end of section 203(c) (42 U.S.C. 2473(c)) the following new paragraph:

"(14) to provide effective contractual provisions for the prompt and effective reporting of the results of the activities of the Administration, including full and complete technical reporting of any invention, discovery, improvement, or innovation which may be made in the performance of any work under any contract of the Administration, whether or not patentable under title 35, United States Code.";

(D) by adding at the end of section 203 (42 U.S.C. 2473) the following new subsection:

"(d) For the purposes of chapter 17 of title 35, United States Code, the Administration shall be considered a defense agency of the United States."; and

(E) by adding at the end of title III the following new section:

"USE OF PATENTED INVENTIONS

"SEC. 311. (a) Any object intended for launch, launched, or assembled in outer space shall be considered a vehicle for purpose of section 272 of title 35, United States Code (35 U.S.C. 272).

"(b) The use or manufacture of any patented invention incorporated in a space vehicle launched by the United States Government for a person other than the United States shall not be considered to be a use or manufacture by or for the United States within the meaning of section 1498(a) of title 28, United States Code (28 U.S.C. 1498(a)), unless the Administration gives an express authorization or consent for such use or manufacture.".

(7) Section 6 of the Act of July 7, 1960 (30 U.S.C. 666; 74 Stat. 337) is amended by striking out the first sentence.

(8) Section 4 of the Helium Act (50 U.S.C. 167b; 74 Stat. 920) is amended by striking out all after "utilization" and inserting in lieu thereof a period.

(9) Section 32 of the Arms Control and Disarmament Act (22 U.S.C. 2572; 75 Stat. 634) is repealed.

(10) Section 302(e) of the Appalachian Regional Development Act of 1965 (40 U.S.C. App. 302(e); 79 Stat. 5) is repealed.

(11)(A) The text of section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5908; 88 Stat. 1887) is amended to read as follows:

"SEC. 9. The Administration shall be considered a defense agency of the United States for purposes of chapter 17 of title 35, United States Code."

(B) The heading of such section 9 is amended to read as follows:

"ADMINISTRATION TREATED AS DEFENSE AGENCY FOR PURPOSES OF SECRECY OF INVENTIONS".

(12) Section 5(d) of the Consumer Product Safety Act (15 U.S.C. 2054(d); 88 Stat. 1211) is repealed.

(13) Section 3 of the Act of April 5, 1944 (30 U.S.C. 323; 58 Stat. 191) is repealed.

(14)(A) Section 8001(c)(3) of the Solid Waste Disposal Act (42 U.S.C. 6981(c)(3); 90 Stat. 2829) is repealed.

(B) Section 8004(c)(2) of such Act is amended by striking out "notwithstanding section 8001(c)(3),".

(15) Chapter 18 of title 35, United States Code, is amended—

(A) by inserting ", but does not mean any work-for-others agreement or jointly sponsored research arrangement entered into between a private entity person and the operator of a Government-owned, contractor-operated facility" immediately before the period at the end of section 201(b);

(B) by inserting "or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.)" immediately after "title" in section 201(d);

(C) by inserting ", except that in the case of a sexually propagated variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act (7 U.S.C. 2401(d))) must also occur during the period of contract performance" immediately after "agreement" in section 201(e);

(D) in section 202(a)—

(i) by amending clause (i) to read as follows: "(i) when the contractor is not located in the United States or does not have a place of business located in the United States or is subject to the control of a foreign government,"; and

(ii) by striking out "or (iii)" and inserting in lieu thereof the following: ", (iii) when the funding agreement is related to or associated with an international treaty, agreement, memorandum of understanding, or other arrangement with a foreign government including (but not limited to) agreements of cooperation in science and technology or military agreements relating to weapons development or production, and it is determined by the agency that rights in the Government greater than a nonexclusive license are necessary for the agency to fulfill its obligations under the international treaty, agreement, memorandum of understanding, or other arrangement, (iv) when the funding agreement includes the operation of a Government-owned, contractor-operated facility of the Department of Energy primarily dedicated to that Department's naval nuclear propulsion or weapons related programs and all funding agreement limitations under this subparagraph on the contractor's right to elect title to a subject invention are limited to inventions occurring under the above two programs of the Department of Energy, or (v)";

(E) by adding at the end of section 202(b) the following new paragraphs:

"(4) If the contractor believes that a determination is contrary to the policies and objectives of this chapter or constitutes an abuse of discretion by the agency, the determination shall be subject to section 203(d).

"(5) Whenever the Director of the Office of Management and Budget has determined that one or more Federal agencies are utilizing the authority of section 202(a)(ii) in a manner that is contrary to the policies and objectives of this chapter, he may promulgate regulations under section 206 which establish policies, procedures, and guidelines describing classes of situations in which agencies may not exercise the authorities of that section.";

(F)(i) by amending paragraphs (1), (2), and (3) of section 202(c) to read as follows:

"(1) A requirement that the contractor disclose each subject invention to the contracting Federal agency within a reasonable time after it becomes known to contractor personnel responsible for the administration of patent matters and that the Federal Government may receive title to any subject invention not disclosed to it within such time.

"(2) A requirement that the contractor make a written election within 2 years after disclosure to the Federal agency (or such additional time as may be approved by the Federal agency) whether the contractor will retain title to a subject invention, except that (A) in any case where publication, on sale, or public use has initiated the one year statutory period in which valid patent protection

can still be obtained in the United States, the period for election may be shortened by the Federal agency to a date that is not more than 60 days prior to the end of the statutory period, and (B) the Federal Government may receive title to any subject invention in which the contractor does not elect to retain rights or fails to elect rights within such time.

"(3) A requirement that a contractor electing rights in a subject invention agrees to file a patent application prior to any statutory bar date that may occur under this title due to publication, on sale, or public use, and shall thereafter file corresponding patent applications in other countries in which it wishes to retain title within reasonable times, and that the Federal Government may receive title to any subject inventions in the United States or other countries in which the contractor has not filed patent applications on the subject invention within such times."; and

(ii) by amending paragraph (4) of section 202(c) by inserting "(A)" after "(4)", and by adding at the end thereof the following new subparagraph:

"(B) the right to require the contractor, inventor, or assignee to license another person to practice a subject invention on reasonable terms if—

"(i) such licensing is necessary to permit lawful commercial manufacture, use or sale by a third party of a specified end item of a major, multiyear research and development project of the Department of Energy or the National Aeronautics and Space Administration and such subject invention was made during research and development activities directly funded under that project;

"(ii) a similar product or process is not commercially available as a reasonable substitute for the licensing; and

"(iii) such right is specified in the contract.";

(G) by striking out "may" in section 202(c)(5) and inserting in lieu thereof "as well as any information on utilization or efforts at obtaining utilization obtained as part of a proceeding under section 203 of this chapter shall";

(H) by amending paragraph (7) of section 202(c) to read as follows:

"(7) in the case of a nonprofit organization—

"(A) a requirement that the contractor share royalties with the inventor, and

"(B) a requirement that the balance of any royalties or income earned by the contractor with respect to subject inventions, after payments of expenses (including payments to inventors) incidental to the administration of subject inventions, be utilized for the support of scientific research or education.";

(I) by adding the following new paragraph at the end of section 202(c):

"(9) After payment of patenting costs, licensing costs, payments to inventors, and other expenses, the balance of any royalties or income earned on subject inventions by the contractor operating a Government-owned contractor-operated facility (up to a total equal to 5 percent of that facility's annual budget), if the contractor elects to retain such funds, shall be used by such contractor for scientific research, development, and education consistent with the research and development mission and objectives of such facility including activities that increase the licensing potential of other inventions of the facility. Any additional royalties and income shall be returned to the Treasury. To the extent that it provides the most effective technology transfer, the licensing of the inventions involved shall be administered by contractor employees on location at the facility.";

(J) by adding the following new subsection at the end of section 202:

"(g)(1) A Federal agency may at any time waive all or any part of the rights of the United States, under sections 202, 203, and 204 of this chapter, to any subject inventions made under a funding agreement or class of funding agreements if the agency determines that the interests of the United States and the general public will be best served thereby including, but not limited to, instances where—

"(A) the funding agreement involves cosponsored, cost shared, or joint venture research or development and the contractor or other sponsor or joint venturer is required to make or has made a substantial contribution of funds, facilities, personnel, data, or equipment to the work performed under the funding agreement, or

"(B) the conditions justifying acquisition of title by the Government under section 202(a) no longer exist or do not apply in the case of the subject invention.

The agency shall maintain a record, which shall be made public and periodically updated, of determinations made under this paragraph.

"(2) In making determinations under paragraph (1)(A) of this subsection, the agency shall consider at least the following objectives:

"(A) Encouraging the wide availability to the public of the benefits of Government-sponsored research and development in the shortest practicable time.

"(B) Promoting the commercial utilization of inventions made under Government funding agreements.

"(C) Encouraging participation by highly qualified private persons in Government-sponsored research and development programs.

"(D) Fostering competition and preventing the creation or maintenance of situations inconsistent with the antitrust laws.";

(K) by adding at the end of section 203 the following new sentences: "A determination pursuant to this section or section 202(b)(1) shall not be subject to the Contract Disputes Act (41 U.S.C. 601 et seq.). An administrative appeals procedure shall be established by regulations promulgated by the Director of the Office of Management and Budget in accordance with section 206. Any contractor, inventor, assignee, or exclusive licensee adversely affected by a determination under this section may, at any time within sixty days after the determination is issued, file an appeal under the appeals procedure established pursuant to the preceding sentence or file a petition in the United States Claims Court, which shall have jurisdiction to determine the matter de novo and to affirm, reverse, or modify as appropriate, the determination of the Federal agency. In cases described in paragraphs (a) and (c), the agency's determination shall be held in abeyance pending the exhaustion of appeals or petitions filed under the preceding sentence.";

(L) by adding at the end of the chapter the following new sections:

"§ 212. Assignment of title or rights

"Subject to regulations promulgated under section 206, upon a determination that to do so is in the best interests of the Government, an agency may assign title or other rights to an invention to a person where such title or rights are held by the Government under such terms and conditions as will encourage the domestic commercial use of such technology.

"§ 213. Disposition of rights in educational awards

"No scholarship, fellowship, training grant, or other funding agreement made by a Federal agency primarily to an awardee for educational purposes will contain any provision giving the Federal agency any rights to inventions made by the awardee.";

(M) by adding at the end of the table of sections for the chapter the following new items:

"212. Assignment of title or rights.
"213. Disposition of rights in educational awards.";

and

(N) by amending section 206 to read as follows:

"§ 206. Uniform clauses and regulations

"The Secretary of Commerce may initiate the regulations and revisions thereto and standard funding agreement provisions, required to implement sections 202 through 204, to be promulgated by the Director of the Office of Management and Budget after full consideration of agency and public comment.".

(16) Section 6(e) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3705(e); 94 Stat. 2313) is repealed.

(17) Section 10(a) of the Act of June 29, 1935 (7 U.S.C. 427i(a)) is amended by striking out the last sentence.

(18) Section 427(b) of the Federal Mine Safety and Health Act of 1977 (30 U.S.C. 937(b)) is amended by striking out the last sentence.

(19) Section 306(d) of the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1226(d)) is amended by striking out the first two sentences.

(20) Section 21(d) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2218(d)) is repealed.

(21) Section 6(b) of the Solar Photovoltaic Energy Research, Development, and Demonstration Act of 1978 (42 U.S.C. 5585(b)) is amended by inserting "as amended" after "et seq.)".

(22) Section 12 of the Critical Agricultural Materials Act (7 U.S.C. 178j) is repealed.

(23) Section 109 of the Water Resources Research Act of 1984 (42 U.S.C. 10308) is repealed.

RELATIONSHIP TO ANTITRUST LAWS

SEC. 403. Nothing in this Act shall be deemed to convey to any person immunity from civil or criminal liability, or to create any defense to actions, under any antitrust law.

EFFECTIVE DATE

SEC. 404. (a) This Act shall take effect six months after the date of the enactment of this Act.

(b) After the effective date of this Act, each Federal agency may allow a contractor or an inventor to retain title to any subject inventions made under contracts awarded prior to the effective date of this Act, subject to the same terms and conditions as those which would apply under this Act had the contract been entered into after the effective date of this Act.

(c) Any rights in a subject invention granted to a contractor or inventor prior to the effective date of this Act are hereby ratified and affirmed if such rights were granted in accordance with agency regulations in effect at the time of the grant.

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COMMITTEE ACTIONS

H.R. 5003 was introduced by Congressman Fuqua on March 1, 1984 with Mr. Brown of California, Mr. Walgren, Mr. Boucher, Mr. Sensenbrenner, and Mr. Gregg as cosponsors. The bill was referred jointly to the Committees on Science and Technology and on the Judiciary, and within the Science Committee to its Subcommittee on Science, Research and Technology (SRT).

The SRT Subcommittee held legislative hearings on May 15 and May 16. Witnesses were Dr. Bruce Merrifield (Assistant Secretary for Productivity, Technology, and Innovation/Department of Commerce), Mr. Roger Ditzel (Director of Patents/University of California), Dr. Robert Fischell (Inventor of the Year/Intellectual Property Owners, Inc., and Chief of Technology Transfer/Applied Physics Laboratory/John Hopkins University), Mr. Harry F. Manbeck (General Patent Counsel/The General Electric Company), Mr. Cruzan Alexander (Vice President/Intellectual Property Owners, Inc.), Dr. Jerry Hudis (Assistant Director/Brookhaven National Laboratory), and Dr. Robert F. Shaw (Consultant/American Institute of Aeronautics and Astronautics).

The SRT Subcommittee met on June 19, 1984 for discussion of H.R. 5003. On July 25, 1984 the Subcommittee considered amend-

ments to H.R. 5003, adopted an amendment in the nature of a substitute, and by voice vote, a quorum being present, ordered the bill reported as amended to the Committee on Science and Technology. The bill was further amended by the Full Committee on August 8, 1984 and reported from Committee by voice vote.

Need for the Legislation

The historical practice of some agencies of having the government retain patent title to U.S. funded inventions and license those inventions to all comers is generally credited with the failure of most of these inventions to penetrate the commercial marketplace. Government-funded inventions are usually new ideas that need considerable refinement before they are ready for the commercial marketplace. Often the commercially viable concept is only tangential to the main purpose for which the research was conducted, and an agency cannot justify spending the federal funds to test out the viability of commercial applications.

Private companies are willing to put their own money into developing ideas originating in government research, but only if there is the strong possibility of financial reward at the end of the development process. Most feel it is more difficult to make money without the incentives provided by a protected patent position; they are reluctant to invest the millions required to fine-tune inventions without the guarantee that a competitor would be precluded from also receiving its own government license and then cloning their finished product. Therefore, those portions of government research and development contract work have attracted companies interested in making their profits on government fees rather than profits on commercial spin-offs from government-sponsored work, and the commercial potential of creative ideas emanating from this research lies fallow or may be exploited in another country with a more closed domestic market.

Background

In the 96th Congress, two important laws, P.L. 96-517 and P.L. 96-480, began the reform of federal patent policy and increased the availability of government laboratories to the private sector. P.L. 96-517, signed into law December 12, 1980, permitted small business and non-profit government contractors in most instances to retain patent rights in inventions they made with federal research dollars. Contractors could either further develop the invention themselves or work with a licensee to transform the invention into a viable commercial product. P.L. 96-517 also included an initial attempt to set up rules for exclusive licensing of federal inventions.

The original House-passed version of P.L. 96-517 contained a uniform federal patent policy applying to all business, but the Senate deleted the portions applying to government contractors other than small business and universities. The expectation was that the deleted portions would be reviewed in the 97th Congress as is evidenced by the following colloquy between Congressman Fuqua and Congressman Kastenmeier, November 21, 1980 at the time of final House passage of P.L. 96-517.

Mr. FUQUA. Mr. Speaker, further reserving the right to object, I might say that I want to commend the gentleman from Wisconsin (Mr. Kastenmeier) for his efforts.

I, too, am very disappointed that we have not been able to get a full patent policy review, but I think this is a step in the right direction. It is better than what we have today, and I hope that we have the assurances of the gentleman from Wisconsin (Mr. Kastenmeier) that we can move forward on this. I can assure him of my commitment to try to work in the next Congress and try to insure that we do bring about a more uniform patent policy for this country.

Mr. KASTENMEIER. Mr. Speaker, if the gentleman will yield further, he has that assurance, and indeed it is very important that we achieve a uniform patent policy for other than small businesses and universities which are provided for in this bill. That will be a high priority as far as I am concerned.

P.L. 96-480, the Stevenson-Wydler Act, made improved utilization of federally funded technology by state and local governments and by the private sector a matter of national policy; NASA's technology utilization program had promoted the wide-spread dissemination of the results of NASA's activities for over 20 years, but many other agencies did not have an aggressive program of technology transfer. Research and technology applications offices were established within most federal laboratories to support the transfer to the private sector of technology with commercial potential. The Center for Utilization of Federal Technology was also begun as a clearinghouse for the transfer of information on federally owned or originated technologies having potential application to State and local governments and to private industry.

These laws and other events have made government research officials more sensitive to and more interested in cooperating with the private sector. Universities and small businesses have had incentive to promote inventions made under federal contract and more federal inventions have been the basis of commercial products. For a patent to be a valuable property right, access to the inventor and his or her expertise are usually required. Therefore, it is not surprising that this new federal policy, of placing the exclusive right to develop an invention in the hands of the inventor's employer, has led to better commercial exploitation of quality government-funded inventions than before.

The experience from the first two years under P.L. 96-517 was positive enough to lead President Reagan by Executive Order on February 18, 1983 to expand the scope of P.L. 96-517. This order authorizes all contractors to receive invention rights derived from federally funded research to the extent permitted by law. However, since over 20 varied patent statutes and provisions are in effect for different agencies, a uniform federal patent policy cannot be established by Executive Order alone. This has led to H.R. 5003 which legislatively establishes a uniform federal patent policy, revises 96-517 in light of three years of experience, and repeals all statutes which now stand in the way of the uniform policy.

Brief Description of the Bill as Reported

The primary purpose of H.R. 5003 is to remove all legislative roadblocks to implementation of the February 18, 1983 Executive Order and to establish a more uniform federal patent policy. Under H.R. 5003, unless a specific exception is invoked by the contracting agency, the contractor's right to retain patent rights for commercial development or licensing of inventions occurring under the contract will be written into the contract. Even if the government has reason to invoke an exception, the contracting agency should review the inventions as they occur and allow the contractor to develop those with commercial potential if it is in the public interest to do so.

Contractor retention of patent rights is conditioned on good faith efforts to develop and market the invention. If the contractor has made no effort to exploit the technology within three years of issuance of the patent to him or such longer time as the contracting agency may allow, the invention can be listed with the agency's licensing service or the National Technology Information Service as available for licensing, and march-in provisions allowing the government to force licensing of the patent to third parties can be invoked by the contracting agency at any appropriate time. The march-in provisions also can be used for health and safety or public use reasons.

The intent of the legislation remains to transfer patent rights into the private sector for development when transfer is in the best interest of both the government and private sector. Therefore, limited governmental authority to assign patent property rights is provided. The Department of Commerce lead role in innovation is enhanced by the responsibilities to provide assistance to other agencies in identification of commercial potential in inventions, to assist other agencies in the promotion of those inventions, to publish notification of all government-owned inventions that are available for licensing and to initiate uniform patent regulations and their revisions to be promulgated by the director of OMB after public and agency comment.

The other purpose of H.R. 5003 is to establish a more consistent and effective federal patent policy. Therefore, the bill H.R. 5003 as reported closely follows the allocation of administrative and review responsibilities made in P.L. 96-517 as amended. It also amends or strikes provisions of over 20 other acts to bring them into conformity with the patent policy contained in H.R. 5003 and P.L. 96-517.

Effect of the Amendment in the Nature of a Substitute

H.R. 5003 as reported strikes all after the enacting clause and inserts new text. The new text preserves the basic structure of the bill, as introduced. The amendment incorporates several substantive changes as well as a larger number of technical changes both of which are explained in the section-by-section analysis portion of this report.

The changes to H.R. 5003 as introduced have the following effects:

(1) To give the Secretary of Commerce the power to initiate uniform patent regulations and their revisions and to give the

Director of the Office of Management and Budget the authority to promulgate those regulations after full consideration of agency and public comments;

(2) To clarify ownership of inventions occurring at Government-owned contractor-operated facilities;

(3) To give the contractor other than a grantee or participant in a cooperative agreement the right to appeal administratively or to go to the U.S. Claims Court if he feels the agency has erred in its retention of patent rights under the contract;

(4) To permit the government to direct licensing of end use products of major multiyear technology development programs of DOE and NASA;

(5) To provide for advertisement to the private sector of government-funded patents on which no development or commercialization work is done within three years;

(6) To provide for assignment of Government-owned patents; and

(7) To forbid government retention of patent rights in inventions of awardees of scholarships, fellowships, and training grants.

Section-by-Section Analysis

Rather than repealing P.L. 96–517 or amending it to include all classes of contractors, H.R. 5003 continues the practice (regarding invention rights arising from government contracts) of treating small business and non-profit organizations separately from other government contractors. Title I of the bill details general policy considerations. Title II assigns specific policy coordination functions to the Federal Coordination Council for Science, Engineering, and Technology and the Secretary of Commerce. Title III, in substantial detail, allocates rights to inventions between the government and contractors not covered by 96–517. Title IV contains definitions and amends over 20 existing laws including P.L. 96–517 to bring them into conformity with H.R. 5003 and the President's Executive Order.

TITLE I—POLICY

Section 101. Findings. Inventions resulting from Government-sponsored research and development constitute a valuable national resource which should be developed in a manner consistent with public interest and the equities of the respective parties. Therefore, a flexible Government-wide policy to increase the utilization of the results of Government-sponsored research and development is needed.

TITLE II—FUNCTIONS OF VARIOUS AGENCIES

Section 201. The Federal Coordinating Council for Science, Engineering and Technology, which is chaired by the Director of the Office of Science and Technology Policy, is authorized to make recommendations on the various administrative policies and practices needed to carry out the Act, including corrective actions the Coun-

cil finds necessary from its review of instances of government retention of rights under the Act. The Council is expected to augment, not supplant the current government framework for promulgation of procurement regulations.

A Subcommittee of the Council, chaired by the Secretary of Commerce and with membership from each government agency with a major R & D program, is available to formulate recommendations for the Council and the Secretary of Commerce and to ensure that each affected agency has appropriate input into the policy-making process. All policy recommendations if then adopted by the Director before being issued in final form, and would then pass through the appropriate channels now in existence and those created by this Act. Initial representation on the Subcommittee should include, but not be limited to, representatives from the Department of Energy, the Department of Health and Human Services, the National Aeronautics and Space Administration, the National Science Foundation, the Department of Agriculture, the Department of Transportation, the Department of Interior, and the Environmental Protection Agency.

To carry out its responsibilities, the Council is authorized to acquire, review and analyze pertinent data, including documentation related to government retention of patents under Sec. 301(a), and to publish an annual report.

Section 202. The Secretary of Commerce is authorized to assist other agencies in the promotion of licensing and utilization of Government-owned inventions, to give advice in various patent matters, and to make available evaluation services to assess the commercial potential of these inventions. Commerce's role is advisory, not managerial, and it is anticiapted that most activities will be performed at the request of the client agency. Commerce is also given authority to publish notifications regarding the availability to the private sector of government-owned inventions. The Secretary of Commerce is given the authority to initiate the uniform federal regulations required to implement the various provisions of this Act. Authority to promulgate such regulations is limited to the Director of the Office of Management and Budget after his office has given full consideration of all public and agency comments. Such proecdure is needed both to ensure prompt issuance of the needed regulations and to make sure that efforts to promote innovative commercial spin-offs from government-sponsored research do not accidentally impede the mission which is the primary purpose of the research.

TITLE III—ALLOCATION OF RIGHTS

Section 301(a). Throughout Title III, contractor means a contractor other than a federal agency, a small business, or a non-profit organization contractor. Parallel provisions for small businesses and non-profit organizations are found in P.L. 96-517 as amended (Chapter 18 of Title 35 of the U.S. Code). Descriptions of sections throughout Title III should also be construed as descriptions of identified provisions added to 96-517 by this Act.

In general, each contractor has the right to elect to retain worldwide title to any invention developed under the subject contract.

The section further enumerates five exceptions to the general rule under which the Government may either eliminate the right to elect to retain title or may limit contractor rights as necessary.

The first exception allows intelligence agencies to protect the security of their activities. This supplements the authority of the government to use the classification system to control sensitive technology in intelligence agencies.

The second exception gives the contracting agency discretionary authority to retain title to patents developed under contract with foreign governments and companies. This is in keeping with this legislation's intent to increase U.S. economic competitiveness.

The third exception deals with contracts that are related to all forms of international agreements. The section is written broadly to permit the contracting agency the latitude to be sensitive in international affairs.

The fourth exception gives agencies the ability to deal with exeptional circumstances as well as with non-routine business relationships. For example, an agency may choose to hold certain process related patents in programs such as uranium enrichment or reprocessing, where for public policy reasons such as nuclear proliferation the business is considered too sensitive to be operated with private sector ownership. As the only legal customer of the technology, the agency may decide that there is no justification for allowing the private sector to hold the patents. The Department of Energy's terminal repository program for high level nuclear waste is an example of a non-routine business relationship. Since the program is funded through special fees levied on the utility industry, the Department may decide that that industry should have a say in the allocation of rights in that program's subject inventions. Exceptional circumstances are not ordinary circumstances. This provision should be used only for the extraordinary circumstance where an important national interest is hurt by the patent remaining with the contractor and where the other four exceptions are inapplicable.

Unlike past versions of this legislation, there is no bill language allowing an agency to retain title to inventions under contracts to develop methods to comply with government regulations. The omission is because of the breadth of the exception. In general, it is felt that private sector ownership of these patents and private sector development of competing health and safety products are the best means of satisfying the regulatory demands. Therefore, those instances in which public health and safety inventions require government control of patents must be justified through this exceptional circumstance provision or through section 303 march-in procedures.

The fifth exception allows the Department of Energy to retain patent rights to inventions arising under work done at or through its major defense production facilities such as the Y-12 Plant at Oak Ridge, Tennessee and laboratories such as Knolls Atomic Power Laboratory, Bettis Atomic Power Laboratory, Sandia National Laboratories, Savannah River Laboratory, Los Alamos National Laboratory, and Lawrence Livermore National Laboratory. This list is not meant to be inclusive, but rather representative, of the size and mission of facilities covered by the exception. Smaller

radiation laboratories on university campuses, biomedical and environmental facilities, or inventions funded from sources other than the weapons related and naval nuclear propulsion system budgets of the Department of Energy are not covered by the exception. Furthermore, the Department is expected to use the authority of section 302 to decide on a case by case basis after inventions occur at defense facilities and laboratories which of these inventions can be transferred to the contractor without damage to the mission of these facilities.

Section 301(b). As a check on the appropriateness of withholding of patent rights, the contractor has two appeal routes. He can proceed either under an administrative appeal procedure or in the U.S. Claims Court. The Director of the Office of Management and Budget is also given authority to promulgate policies, procedures, and guidelines further explaining when the exceptional circumstances provision under Sec. 301(a) may not be used. OMB, through its Office of Federal Procurement Policy, already has the authority under 41 USC 405 to prescribe a single system of government-wide procurement regulations both for property other than real property and for services including and development. Therefore, vesting the authority in the Director of OMB here and in Title II to establish a more uniform treatment of federally-funded patents rather than Comptroller General or another government official also promotes the objective of keep related patent and procurement policies consistent with each other. The Comptroller's Annual Report under P.L. 96-517 and the Director of the Office of Science and Technology Policy's annual report under section 201(b)(5) should provide additional independent review of governmental patent retention policy.

Section 301(c). This section sets out several legislatively mandated elements of the patent clause which is to appear in pertinent government contracts where the contractor has rights in inventions.

(1) A contractor must disclose subject inventions to the contracting federal agency within a reasonable time. Regulations defining reasonable time should be drafted in such a way as to require disclosure early enough to permit the government to protect any right it may have in an invention.

(2) The contractor also is given a reasonable time following disclosure to make a written election to retain title. If as a result of the passage of this legislation, any change is made in current administrative requirements in this area, preference would be for relatively short election deadlines with automatic extensions of the deadline upon written request of the contractor. This would clear the way for prompt and effective reporting of inventions that are well-defined, while giving more time to contractors who desire to investigate the commercial potential of the invention prior to election. The contractor must file patent applications within a reasonable time. If the contractor does not want some or all of the patent rights, the government, if the contractor consents, may then consider requests by the inventor for his retention of those rights. The government may receive those patent titles the contractor or inventor does not elect to pursue.

(3 a and b) The government shall retain a non-exclusive, non-transferrable, irrevocable, paid-up license to practice the subject invention throughout the world and or to have it practiced on behalf of the government in all instances in which a contractor elects title. This license is to give the government the fruits of the inventions it paid for without having to pay fees to the holder of title or licenses in those inventions; there is no intent through this license to authorize the government to compete in commercial markets with private sector companies when such permission to compete is not expressly provided elsewhere by statute.

When international treaties, agreements, memoranda of understanding, or other such arrangements are involved, the government may retain rights as necessary to sublicense other governments or international organizations.

(3c) Under limited circumstances, the Department of Energy (DOE) or NASA may retain the right to direct the licensing of a subject inventions occurring as part of a major mutliyear research and development project. The contractor must reserve the right in the contract with regard to specific end items or products that are expected to be made commercial at the end of the research and development project. In NASA, for instance, there could be a planned development essential to any commercial use of space; under those circumstances, it might not be within the public interest to give the federal contractor developing such a concept monopoly control over it. In DOE, technologies like magnetic fusion are federally funded and years away from the commercial marketplace. It may not be logical to spread out over the years among a variety of contractors what will be the background patents for a commercial operation the agency may wish to transfer to the private sector as a unit. If the agency feels that to do so may be critical to the ultimate commercialization of the project, the agency should have the discretion within the purposes of the Act to retain the ability to easily reassemble the technological package at a later date. However, the fact that the patents are in the private sector will mean that companies are not precluded from doing such an assemblage on their own.

(4) At least one report on efforts to obtain commercial utilization of a contractor-retained invention is required during the first three years after issuance of the patent to the contractor or other private sector title holder. The sole purpose of this report is to document the required effort necessary for the contractor, inventor, or assignee to avoid advertising of the invention under Section 303(c); therefore, lengthy reports are not anticipated. The agency, in accordance with applicable regulations, may require more frequent reports both during and after the initial three year period. Additional information may be required by the government for purposes including deciding whether the government should use its march-in rights under Section 303(a). No information collected under this section is to be disseminated to competitors or the public under the Freedom of Information Act.

(5) The contractor shall assure that any patent application shall include within the specification section, a statement specifying the government's rights in the invention and that the invention was made in part or in whole with federal funds.

(6) Government-owned, contractor operated (GOCO) facilities are treated as a special case. Typically, an operator sets up a separate division of the company to run the facility, and the government pays all costs for that division. The work of the laboratory is often unrelated to the company's commercial divisions. Therefore, commerical development of government inventions by the contractor is not as likely as with other government contractors; rather, the GOCO operator is likely to promote commercialization by licensing to a third party. This paragraph allocates the revenues from such licensing if the contractor elects to retain such revenues: (a) the first use is to pay all patenting and licensing costs for the invention, (b) the next use, up to an amount equal to 5% of the facility's annual budget is to be used both for a research account controlled by the facility and also to bring other inventions of the facility to the point where they are attractive to potential licensees and its affiliates. All other revenues revert to the Treasury. Regulations should be carefully drawn to preserve the independence of these laboratories and to keep the commercial divisions of the contractor at arms length. The paragraph also provides that to the extent it provides the most effective technology transfer, the licensing of inventions will be done by the contractor's on-site employees rather than by individuals in corporate headquarters; this reflects the primary intent of the legislation, to foster commerical use of government-financed inventions by keeping the rights to use or commercialize the technology as close to the inventor as possible. Title to inventions being licensed should be held in the name of the wholly owned subsidiary running the facility for the government so that in the event of a change of contractors, the licensing process may be transferred intact to the successor corporation as a continuing operation of the GOCO.

(7) The contractor may retain a nonexclusive, paid up license in a subject invention, when it does not retain title or when the government forces licensing of an invention under Section 303. This license is to be limited or revoked only to the extent necessary for the government to grant an exclusive license to a third party who, unlike the contractor, is able to commercialize the invention. Therefore, the government is given the right to limit or revoke the contractor's non-exclusive license when that contractor has not retained title if such action is necessary to attract a third party willing to proceed with commerical development of the invention. The government should be diligent in its attempts to find companies who will commercialize despite retention of this right by the contractor and revocation should be used only as a last resort. When the contractor willfully fails to disclose an invention, he automatically loses all rights in that invention including his non-exclusive license.

(8) If the contractor sells or grants license in an invention covered by this Act, such conveyance is not to affect any government rights in the invention.

(9) Other contract requirements may be added so long as they are not inconsistent with the Act. Additionally, when the government retains title or an exclusive license in an invention, the government's interest in protecting the invention and in operating its research and production facilities may be paramount to that of the

contractor and may require special contract requirements for prompt reporting, election, and filing of patent applications to ensure that the government's intellectual property rights are obtained, for maintaining the free flow of information among government laboratories, and for establishing the right to enforce the patents in the government's field of use.

Section 302. The broad waiver authority of section 302(a)(1) is included to cover situations in which an agency through minor financial participation, partial compensation of inventors, seek money, or work related to but not central to a project has inadvertently acquired rights in an invention arising or potentially arising under a contract such as the government's non-exclusive license. These rights may not be of use to the government, but may cloud the inventor's patent title. In these instances it could be in everyone's best interest for the government to have the ability to waive any and all rights in the invention. This is broad authority and not to be used capriciously. Therefore, the regulations governing this section should provide examples of the type of instance in which the authority may be used and should limit use of the authority to assure that abuse of the provision is unlikely.

Section 302(a)(2) also provides a mechanism by which the government can transfer title to the contractor after the subject invention has been identified. If one of the exceptions contained in Section 301(a) is invoked in the contract and a government agency retains title or other rights, that agency may decide upon learning the details and potential uses of an invention, that the contractor can make commerical use of an invention without harm to the government interest which caused the exception to be invoked. In this instance, the government should waive some or all of the retained rights and with respect to the waived rights, permit the contractor to proceed as if those rights had been given to him contractually under Section 301(a). Waiver of government rights in favor or private sector joint venturers is also permitted under the section.

Section 303 (a) and (b). March-in rights are one of two methods the government has to make sure the contractor either takes reasonable steps towards commercialization of a retained patent or licenses the patent to meet health and safety needs or federal regulatory requirements. Under this provisions, the contractor or other private sector title holder retains title, but the government, subject to regulations and judicial review, can require exclusive, partially exclusive, or non-exclusive licenses to be issued if it involves one of the enumerated march-in provisions.

Section 303(c) provides advertising as the second method to help unused subject inventions become available to companies who will develop them. The contractor or other private sector title holder in his mandatory report under Section 301(c)(4) is expected to show a good faith effort towards commercialization of the invention by achieving minimum standards set forth in agency regulations requiring further development or commercialization of the invention. If he does not do so in the first three years after issuance of title to him and the agency determines the invention to have commercial value, the agency shall advertise the invention through its in-house licensing program or through the licensing program of the National Technical Information Service as available for licensing by the

patent holder or holder of exclusive license. The section's only purpose is to provide a means short of "march-in" for the government to attract potential commercial developers to an invention not being pursued by the contractor or his licensee, but march-in is available under subsection (a) if for defensive patent purposes, a patent holder or exclusive licensee refuses to consider requests to license under reasonable terms. Contractors, who decided not to pursue development after taking title, may also return title to the government if they have no plan to commercialize the invention.

Section 304. In general, the legislation makes it more difficult for an agency to require a contractor to license background patents. Background patents are defined as non-subject inventions where the contractor holds the right to license and where infringement cannot be reasonably avoided in the practice of a subject invention. After enactment, an assistant secretary level official with specific programmatic responsibility must sign off on any contract provision requiring licensing of a background patent, thereby guaranteeing that such provisions are given high level attention in the agency and not treated as routine. Furthermore, an appropriate assistant secretary level official must sign off on the actual licensing which must be preceded by a hearing on the record where the contractor holding the background patent has the right to participate. These safeguards make requiring a license a difficult procedure, but leave that possibility of licensing in exceptional circumstances such as when a government-funded patent is being used for defensive purposes to hold down the level of competition for an existing product line. In such an instance, it may be appropriate for the government to require licensing of the government-funded invention through its march-in rights under Section 303 and also to require licensing of any background patents on which that research was built.

TITLE IV—MISCELLANEOUS

Section 401. The terms "federal agency", "small business firm", "non-profit organization", "invention", "subject invention", and "practical application" are defined identically or in a substantially similar manner in P.L. 96-517 and this section. "Contractor" is defined as any person other than a federal agency or a contractor covered by P.L. 96-517. The definition of "contract" under P.L. 96-517 is substantially the same as the definition of "funding agreement" in P.L. 96-517 and both are modified to make clear that contracts for third party sponsored research at GOCOs between operators of GOCO facilities and private sector persons where the private sector is paying for the research such as collaborative arrangements or work for others agreements, are not covered by this Act. Subcontracts related to GOCO contracts are covered by the Acts. Other terms defined are "Government", "Secretary", "Director", "antitrust law", "background patent", "United States", "inventor", and "government-owned, contractor-operated facility" (GOCO). "Background patent" is defined as not being a subject invention, as owned or controlled by the contractor, and which the contractor but not the Government has the right to license to others. "GOCO"

is defined broadly to include all federally funded research and development centers.

Section 402. Twenty-three other Acts are amended to repeal or amend patent provisions which are not in conformity with H.R. 5003. The intent of the section is to bring uniformity to federal patent policy. The majority of the provisions are standard provisions which appeared in many laws giving the government title to patents and encouraging non-exclusive licensing; these provisions are in conflict both with H.R. 5003 and with the President's Executive Order.

A few agencies have more comprehensive statutes dealing with all intellectual property rights and technology transfer. It is the intent of this legislation to change these laws only to the extent necessary to bring them into conformity with this Act. For instance, NASA's exemplary program in technology transfer should continue with only minor changes after the Act becomes law. Prompt and effective reporting of all innovations by contractors not covered by P.L. 96-517 should continue under the National Aeronautics and Space Act of 1958 as amended whether or not the innovations are patentable. Regulations currently in effect for universities under P.L. 96-517 should govern relations between NASA and universities to the extent they are applicable.

The Act also amends P.L. 96-517. Definitions of "invention" and "subject invention" are brought into conformity with H.R. 5003. The disposition of rights section of P.L. 96-517 is expanded in several places by adding language identical to that contained in Title III of this Act and to exclude work-for-others arrangements and similar contracts between GOCO operators and private sector entities. Certain provisions limiting assignment of rights and governing the issuing and promulgation of government regulations are changed to bring them into conformity with H.R. 5003.

Section 212 is added to P.L. 96-517 to permit the government to assign title and other rights in inventions. Subject to uniform regulations to be promulgated under the Act, an agency may auction off rights, enter into exclusive negotiations with potential purchasers or use any other commercially acceptable method of transferring these rights. When patents with only marginal commercial value are involved, the agency should consider giving title to individuals who will promise to put forth the effort and money to develop the invention into a commercial product or process. This section should be viewed as an alternative to the licensing provisions of P.L. 96-517; furthermore, it is supplementary to the principal policy of government transfer of patent title to the contractor under Section 301 of H.R. 5003 and is not to be used as a means of acquiring royalties, fees, or other remuneration from contractors or inventors to which an agency would not otherwise be entitled or to avoid the provisions of Title III of H.R. 5003. The objectives of this provision are to avoid unnecessary governmental accumulation of patents that could be utilized by private companies and to provide an additional means of disposing of selected patents from the government's present inventory as well as unneeded patents accumulated under the various provisions of this Act and P.L. 96-517.

Section 213 is added to keep the government from retaining title to inventions made by awardees of government scholarships, train-

eeships or other financial aid. It is rare for major inventions to be made exclusively by such individuals and government retention of such rights have made established inventors unwilling to train such individuals for fear of government retention of rights if the student is listed on a patent application as co-inventor with his professor or employer.

Section 403. This Act is not intended to affect antitrust law.

Section 404. The Act's effective date is six months after enactment. Agencies, after the effective date, are authorized to allow contractors to retain title to subject inventions made under contracts that predate the effective date under the same terms and conditions as would apply had the contract been entered into after the effective date. This will permit uniform policies to take effect prior to the expiration date of multi-year contracts now in effect, provided that such policy changes do not take any rights in a subject invention from a contractor or inventor.

Impact on Inflation

In accordance with Rule XI, Clause 2(l)(4) of the Rules of the House of Representatives the following statement is made concerning the inflationary impact of H.R. 5003.

H.R. 5003 is assessed to have an adverse inflationary effect on prices and costs in the operation of the national economy.

Committee Oversight Findings and Recommendations

Pursuant to Rule XI, Clause 2(l)(3) of the Rules of the House of Representatives, and under the authority of Rule X, Clause 2(b)(1) and Clause 3(f), results and findings of the Committee oversight activities regarding Federal patent policy are incorporated in the recommendations found in the present bill and report.

Summary of Government Operations Committee Finding and Recommendations

No findings and recommendations on oversight activity pursuant to Rule X, Clause 2(b)(2) and Rule XI, Clause 2(l)(3) of the Rules of the House of Representatives have been submitted by the Committee on Government Operations for inclusion in this report.

Budget Analysis and Projection

H.R. 5003 provides no new budget authority or tax expenditures. Consequently, the provisions of section 308(a) of the Congressional Budget Act are not applicable.

U.S. Congress,
Congressional Budget Office,
Washington, DC, August 10, 1984.

Hon. Don Fuqua,
Chairman, Committee on Science and Technology,
House of Representatives, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has reviewed H.R. 5003, the Uniform Science and Technology Research and Development Utilization Act, as ordered reported by the House

Committee on Science and Technology, August 8, 1984. Enactment of this bill is not expected to result in any significant cost or savings to federal, state or local governments.

H.R. 5003 would establish a uniform federal policy. The bill would expand the scope of Public Law 96–517, which generally permits small businesses and nonprofit government contractors to retain patent rights in inventions developed with federal research funding, and the Presidential memorandum of February 18, 1983, which authorizes all contractors to receive invention rights derived from federally-funded research, as permitted by existing law. H.R. 5003 would standardize the approximately 20 varied federal patent statutes and provisions currently in effect for different agencies.

Based on information from the Department of Commerce and from the Office of Federal Procurement Policy, which would have authority to issue and promulgate uniform patent regulations, it is expected that federal agencies would incur no substantial ongoing costs or savings relative to current law as a result of the changes in patent procedures mandated in H.R. 5003. One-time costs of approximately $100,000 would be incurred in 1985 to develop new rules and regulations as specified in the bill.

To the extent that H.R. 5003 would simplify certain administrative or contract procedures, or would encourage more competition from firms that would be attracted by the commercial potential of inventions, the federal government could realize savings from enactment of this bill. Because the bill would require each agency to monitor and review the status of the commercial development of inventions, agencies may incur some additional administrative costs. The net change in agency work load and costs is not expected to be significant.

H.R. 5003 would require, under certain circumstances, that contractors share royalties with the federal govenment. Based on the experience of Public Law 96–517, the amount of receipts from royalties is not expected to be significant. Additional revenues, if any, would be deposited in the general fund of the Treasury.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

RUDOLPH G. PENNER, *Director.*

ADMINISTRATION POSITION

At hearings held by the Committee on the bill, H.R. 5003, witnesses representing the Department of Commerce supported the bill as introduced. Their testimony appears in the hearings record.

COMMITTEE RECOMMENDATION

A quorum being present, the Committee ordered the bill favorably reported by a voice vote of those present on August 8, 1984.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omit-

ted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

SECTION 205 OF THE ACT OF AUGUST 14, 1946

AN ACT To provide for further research into basic laws and principles relating to agriculture and to improve and facilitate the marketing and distribution of agricultural products

SEC. 205. (a) In carrying out the provisions of title II of this Act, the Secretary of Agriculture may cooperate with other branches of the Government, State agencies, private research organizations, purchasing and consuming organizations, boards of trade, chambers of commerce, other associations of business or trade organizations, transportation and storage agencies and organizations, or other persons or corporations engaged in the production, transportation, storing, processing, marketing, and distribution of agricultural products whether operating in one or more jurisdictions. Contracts hereunder may be made for work to be performed within a period not more than four years from the date of any such contract, and advance, progress, or other payments may be made. The provisions of section 3648 (31 U.S.C., sec. 529) and section 3709 (41 U.S.C., sec. 5) of the Revised Statutes shall not be applicable to contracts or agreements made under the authority of this section. Any unexpended balances of appropriations obligated by contracts as authorized by this section may, notwithstanding the provisions of section 5 of the Act of June 20, 1874, as amended (31 U.S.C., sec. 713), remain upon the books of the Treasury for not more than five fiscal years before being carried to the surplus fund and covered into the Treasury. [Any contract made pursuant to this section shall contain requirements making the result of such research and investigations available to the public by such means as the Secretary of Agriculture shall determine.]

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SECTION 501 OF THE FEDERAL COAL MINE HEALTH AND SAFETY ACT OF 1969

RESEARCH

SEC. 501. (a) * * *

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(c) In carrying out the provisions for research, demonstrations, experiments, studies, training, and education under this section and sections 301(b) and 502(a) of this Act, the Secretary of the Interior and the Secretary of Health and Human Services may enter into contracts with, and make grants to, public and private agencies and organizations and individuals. [No research, demonstrations, or experiments shall be carried out, contracted for, sponsored, cosponsored, or authorized under authority of this Act, unless all information, uses, products, processes, patents, and other developments resulting from such research, demonstrations, or experiments will (with such exception and limitation, if any, as the Secretary of the Interior or the Secretary of Health and Human

Services may find to be necessary in the public interest) be available to the general public.

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SECTION 106 OF THE NATIONAL TRAFFIC AND MOTOR VEHICLE SAFETY ACT OF 1966

SEC. 106. (a) The Secretary shall conduct research, testing, development, and training necessary to carry out the purposes of this title, including, but not limited to—

(1) collecting data from any source for the purpose of determining the relationship between motor vehicle or motor vehicle equipment performance characteristics and (A) accidents involving motor vehicles, and (B) the occurrence of death, or personal injury resulting from such accidents;

(2) procuring (by negotiation or otherwise) experimental and other motor vehicle or motor vehicle equipment for research and testing purposes;

(3) selling or otherwise disposing of test motor vehicles and motor vehicle equipment and reimbursing the proceeds of such sale or disposal into the current appropriation available for the purpose of carrying out this title.

(b) The Secretary is authorized to conduct research, testing, development, and training as authorized to be carried out by subsection (a) of this section by making grants for the conduct of such research, testing, development, and training to States, interstate agencies, and nonprofit institutions.

[(c) Whenever the Federal contribution for any research or development activity authorized by this Act encouraging motor vehicle safety is more than minimal, the Secretary shall include in any contract, grant, or other arrangement for such research or development activity, provisions effective to insure that all information, uses, processes, patents, and other developments resulting from that activity will be made freely and fully available to the general public. Nothing herein shall be construed to deprive the owner of any background patent of any right which he may have thereunder.]

SECTION 12 OF THE NATIONAL SCIENCE FOUNDATION ACT OF 1950

PATENT RIGHTS

SEC. 12. [(a) Each contract or other arrangement executed pursuant to this Act which relates to scientific research shall contain provisions governing the disposition of inventions produced thereunder in a manner calculated to protect the public interest and the equities of the individual or organization with which the contract or other arrangement is executed: *Provided, however,* That nothing in this Act shall be construed to authorize the Foundation to enter into any contractual or other arrangement inconsistent with any provision of law affecting the issuance or use of patents.]

(b) No officer or employee of the Foundation shall acquire, retain, or transfer any rights, under the patent laws of the United

States or otherwise, in any invention which he may make or produce in connection with performing his assigned activities and which is directly related to the subject matter thereof: *Provided, however,* That this subsection shall not be construed to prevent any officer or employee of the Foundation from executing any application for patent on any such invention for the purpose of assigning the same to the Government or its nominee in accordance with such rules and regulations as the Director may establish.

SECTION 152 OF THE ATOMIC ENERGY ACT OF 1954

[SEC. 152. INVENTIONS MADE OR CONCEIVED DURING COMMISSION CONTRACTS.—Any invention or discovery, useful in the production of utilization of special nuclear material or atomic energy, made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission, shall be vested in, and be the property of, the Commission, except that the Commission may waive its claim to any such invention or discovery under such circumstances as the Commission may deem appropriate, consistent with the policy of this section. No patent for any invention or discovery, useful in the production or utilization of special nuclear material or atomic energy, shall be issued unless the applicant files with the application, or within thirty days after request therefor by the Commissioner of Patents (unless the Commission advises the Commissioner of Patents that its rights have been determined and that accordingly no statement is necessary) a statement under oath setting forth the full facts surrounding the making or conception of the invention or discovery described in the application and whether the invention or discovery was made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission, regardless of whether the contract, subcontract, or arrangement involved the expenditure of funds by the Commission. The Commissioner of Patents shall as soon as the application is otherwise in condition for allowance forward copies of the application and the statement to the Commission.

[The Commissioner of Patents may proceed with the application and issue the patent to the applicant (if the invention or discovery is otherwise patentable) unless the Commission, within 90 days after receipt of copies of the application and statement, directs the Commissioner of Patents to issue the patent to the Commission (if the invention or discovery is otherwise patentable) to be held by the Commission as the agent of and on behalf of the United States.

[If the Commission files such a direction with the Commissioner of Patents, and if the applicant's statement claims, and the applicant still believes, that the invention or discovery was not made or conceived in the course of or under any contract, subcontract or arrangement entered into with or for the benefit of the Commission entitling the Commission to the title to the application or the patent the applicant may, within 30 days after notification of the filing of such a direction, request a hearing before a Board of

Patent Interferences. The Board shall have the power to hear and determine whether the Commission was entitled to the direction filed with the Commissioner of Patents. The Board shall follow the rules and procedures established for interference cases and an appeal may be taken by either the applicant or the Commission from the final order of the Board to the United States Corut of Appeals for the Federal Circuit in accordance with the procedures governing the appeals from the Board of Patent Interferences.

[If the statement filed by the applicant should thereafter be found to contain false material statements any notification by the Commission that it has no objections to the issuance of a patent to the applicant shall not be deemed in any respect to constitute a waiver of the provisions of this section or of any applicable civil or criminal statute, and the Commission may have the title to the patent transferred to the Commission on the records of the Commissioner of Patents in accordance with the provisions of this section. A determination of rights by the Commission pursuant to a contractual provision or other arrangement prior to the request of the Commissioner of Patents for the statement, shall be final in the absence of false material statements or nondisclosure of material facts by the applicant.]

NATIONAL AERONAUTICS AND SPACE ACT OF 1958

TITLE II—COORDINATION OF AERONAUTICAL AND SPACE ACTIVITIES

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FUNCTIONS OF THE ADMINISTRATION

SEC. 203. (a) * * *

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(c) In the performance of its functions the Administration is authorized—

(1) * * *

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(14) to provide effective contractual provisions for the prompt and effective reporting of the results of the activities of the Administration, including full and complete technical reporting of any invention, discovery, improvement, or innovation which may be made in the performance of any work under any contract of the Administration, whether or not patentable under title 35, United States Code.

(d) For the purposes of chapter 17 of title 35, United States Code, the Administration shall be considered a defense agency of the United States.

TITLE III—MISCELLANEOUS

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[PROPERTY RIGHTS IN INVENTIONS

[SEC. 305. (a) Whenever any invention is made in the performance of any work under any contract of the Administration, and the Administrator determines that—

[(1) the person who made the invention was employed or assigned to perform research, development, or exploration work and the invention is related to the work he was employed or assigned to perform, or that it was within the scope of his employment duties, whether or not it was made during working hours, or with a contribution by the Government of the use of Government facilities, equipment, materials, allocated funds, information proprietary to the Government, or services of Government employees during working hours; or

[(2) the person who made the invention was not employed or assigned to perform research, development, or exploration work, but the invention is nevertheless related to the contract, or to the work or duties he was employed or assigned to perform, and was made during working hours, or with a contribution from the Government of the sort referred to in clause (1),

such invention shall be the exclusive property of the United States, and if such invention is patentable a patent therefor shall be issued to the United States upon application made by the Administrator, unless the Administrator waives all or any part of the rights of the United States to such invention in conformity with the provisions of subsection (f) of this section.

[(b) Each contract entered into by the Administrator with any party for the performance of any work shall contain effective provisions under which such party shall furnish promptly to the Administrator a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation which may be made in the performance of any such work.

[(c) No patent may be issued to any applicant other than the Administrator for any invention which appears to the Commissioner of Patents and Trademarks to have significant utility in the conduct of aeronautical and space activities unless the applicant files with the Commissioner, with the application or within thirty days after request therefor by the Commissioner, a written statement executed under oath setting forth the full facts concerning the circumstances under which such invention was made and stating the relationship (if any) of such invention to the performance of any work under any contract of the Administration. Copies of each such statement and the application to which it relates shall be transmitted forthwith by the Commissioner to the Administrator.

[(d) Upon any application as to which any such statement has been transmitted to the administrator, the Commissioner may, if the invention is patentable, issue a patent to the applicant unless the Administrator, within ninety days after receipt of such application and statement, requests that such patent be issued to him on behalf of the United States. If, within such time, the Administrator files such a request with the Commissioner, the Commissioner shall transmit notice thereof to the applicant, and shall issue such patent to the Administrator unless the applicant within thirty days after receipt of such notice requests a hearing before a Board of

Patent Interference on the question whether the Administrator is entitled under this section to receive such patent. The Board may hear and determine, in accordance with rules and procedures established for interference cases, the question so presented, and its determination shall be subject to appeal by the applicant or by the Administrator to the United States Court of Appeals for the Federal Circuit in accordance with procedures governing appeals from decisions of the Board of Patent Interferences in other proceedings.

[(e) Whenever any patent has been issued to any applicant in conformity with subsection (d), and the Administrator thereafter has reason to believe that the statement filed by the applicant in connection therewith contained any false representation of any material fact, the Administrator within five years after the date of issuance of such patent may file with the Commissioner a request for the transfer to the Administrator of title to such patent on the records of the Commissioner. Notice of any such request shall be transmitted by the Commissioner to the owner of record of such patent, and title to such patent shall be so transferred to the Administrator unless within thirty days after receipt of such notice such owner of record requests a hearing before a Board of Patent Interferences on the question whether any such false representation was contained in such statement. Such question shall be heard and determined, and determination thereof shall be subject to review, in the manner prescribed by subsection (d) for questions arising thereunder. No request made by the Administrator under this subsection for the transfer of title to any patent, and no prosecution for the violation of any criminal statute, shall be barred by any failure of the Administrator to make a request under subsection (d) for the issuance of such patent to him, or by any notice previously given by the Administrator stating that he had no objection to the issuance of such patent to the applicant therefor.

[(f) Under such regulations in conformity with this subsection as the Administrator shall prescribe, he may waive all or any part of the rights of the United States under this section with respect to any invention or class of inventions made or which may be made by any person or class of persons in the performance of any work required by any contract of the Administration if the Administrator determines that the interests of the United States will be served thereby. Any such waiver may be made upon such terms and under such conditions as the Administrator shall determine to be required for the protection of the interests of the United States. Each such waiver made with respect to any invention shall be subject to the reservation by the Administrator of an irrevocable, nonexclusive, nontransferrable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government pursuant to any treaty or agreement with the United States. Each proposal for any waiver under this subsection shall be referred to an Inventions and Contributions Board which shall be established by the Administrator within the Administration. Such Board shall accord to each interested party an opportunity for hearing, and shall transmit to the Administrator its findings of fact with respect to such proposal and its recommendations for action to be taken with respect thereto.

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[(h) The Administrator is authorized to take all suitable and necessary steps to protect any invention or discovery to which he has title, and to require that contractors or persons who retain title to inventions or discoveries under this section protect the inventions or discoveries to which the Administration has or may acquire a license of use.

[(i) The Administration shall be considered a defense agency of the United States for the purpose of chapter 17 of title 35 of the United States Code.

[(j) As used in this section—

[(1) the term "person" means any individual, partnership, corporation, association, institution, or other entity;

[(2) the term "contract" means any actual or proposed contract agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder; and

[(3) the term "made", when used in relation to any invention, means the conception or first actual reduction to practice of such invention.

[(k) Any object intended for launch, launched, or assembled in outer space shall be considered a vehicle for the purpose of section 272 of title 35, United States Code.

[(l) The use or manufacture of any patented invention incorporated in a space vehicle launched by the United States Government for a person other than the United States shall not be considered to be a use or manufacture by or for the United States within the meaning of section 1498(a) of title 28, United States Code, unless the Administration gives an express authorization or consent for such use or manufacture.]

CONTRIBUTIONS AWARDS

SEC. 306. (a) Subject to the provisions of this section, the Administrator is authorized, upon his own initiative or upon application of any person, to make a monetary award, in such amount and upon such terms as he shall determine to be warranted, to any person [(as defined by section 305)] for any scientific or technical contribution to the Administration which is determined by the Administrator to have significant value in the conduct of aeronautical and space activities. Each application made for any such award shall be referred to [the Inventions and Contributions Board established under section 305 of this Act.] *an Invention and Contributions Board which shall be established by the Administrator within the Administration.* Such Board shall accord to each such applicant an opportunity for hearing upon such application, and shall transmit to the Administrator its recommendation as to the terms of the award, if any, to be made to such applicant for such contribution. In determining the terms and conditions of any award the Administrator shall take into account—

(1) the value of the contribution to the United States;

(2) the aggregate amount of any sums which have been expended by the applicant for the development of such contribution;

(3) the amount of any compensation (other than salary received for services rendered as an officer or employee of the Government) previously received by the applicant for or on account of the use of such contribution by the United States; and

(4) such other factors as the Administrator shall determine to be material.

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USE OF PATENTED INVENTIONS

SEC. 311. (a) Any object intended for launch, launched, or assembled in outer space shall be considered a vehicle for purpose of section 272 of title 35, United States Code (35 U.S.C. 272).

(b) The use or manufacture of any patented invention incorporated in a space vehicle launched by the United States Government for a person other than the United States shall not be considered to be a use or manufacture by or for the United States within the meaning of section 1498(a) of title 28, United States Code (28 U.S.C. 1498(a)), unless the Administration gives an express authorization or consent for such use or manufacture.

SECTION 6 OF THE ACT OF JULY 7, 1960

AN ACT To encourage and stimulate the production and conservation of coal in the United States through research and development by authorizing the Secretary of the Interior to contract for coal research, and for other purposes

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SEC. 6. [No research shall be carried out, contracted for, sponsored, cosponsored, or authorized under authority of this Act, unless all information, uses, products, processes, patents, and other developments resulting from such research will (with such exceptions and limitations, if any, as the Secretary may find to be necessary in the interest of national defense) be available to the general public.] Whenever in the estimation of the Secretary the purposes of this Act would be furthered through the use of patented processes or equipment, the Secretary is authorized to enter into such agreements as he deems necessary for the acquisition or use of such patents on reasonable terms and conditions.

SECTION 4 OF THE HELIUM ACT

SEC. 4. The Secretary is authorized to maintain and operate helium production and purification plants together with facilities and accessories thereto; to acquire, store, transport, sell, and conserve helium, helium-bearing natural gas, and helium-gas mixtures, to conduct exploration for and production of helium on and from the lands acquired, leased, or reserved; and to conduct or contract with public or private parties for experimentation and research to discover helium supplies and to improve processes and methods of helium production, purification, transportation, liquefaction, storage, and utilization[: *Provided, however,* That all research contracted for, sponsored, cosponsored, or authorized under authority of this Act shall be provided for in such a manner that

all information, uses, products, processes, patents and other developments resulting from such research developed by Government expenditure will (with such exceptions and limitations, if any, as the Secretary may find to be necessary in the interest of national defense) be available to the general public: *And provided further,* That nothing contained herein shall be construed as to deprive the owner of any background patent relating thereto to such rights as he may have thereunder.].

SECTION 32 OF THE ARMS CONTROL AND DISARMAMENT ACT

[PATENTS

[SEC. 32. All research within the United States contracted for, sponsored, cosponsored, or authorized under authority of this Act, shall be provided for in such manner that all information as to uses, products, processes, patents, and other developments resulting from such research development by Government expenditures will (with such exceptions and limitations, if any, as the Director may find to be necessary in the public interest) be available to the general public. This subsection shall not be so construed as to deprive the owner of any background patent relating thereto of such rights as he may have thereunder.]

SECTION 302 OF THE APPALACHIAN REGIONAL DEVELOPMENT ACT OF 1965

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GRANTS FOR ADMINISTRATIVE EXPENSES OF LOCAL DEVELOPMENT DISTRICTS AND FOR RESEARCH AND DEMONSTRATION PROJECTS

SEC. 302. (a) * * *

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[(e) No part of any appropriated funds may be expended pursuant to authorization given by this Act involving any scientific or technological research or development activity unless such expenditure is conditioned upon provisions effective to insure that all information, copyrights, uses, processes, patents, and other developments resulting from that activity will be made freely available to the general public. Nothing contained in this subsection shall deprive the owner of any background patent relating to any such activity, without his consent, of any right which that owner may have under that patent. Whenever any information, copyright, use, process, patent or development resulting from any such research or development activity conducted in whole or in part with appropriated funds expended under authorization of this Act is withheld or disposed of by any person, organization, or agency in contravention of the provisions of this subsection, the Attorney General shall institute, upon his own motion or upon request made by any person having knowledge of pertinent facts, an action for the enforcement of the provisions of this subsection in the district court of the United States for any judicial district in which any defendant re-

sides, is found, or has a place of business. Such court shall have jurisdiction to hear and determine such action, and to enter therein such orders and decrees as it shall determine to be required to carry into effect fully the provisions of this subsection. Process of the district court for any judicial district in any action instituted under this subsection may be served in any other judicial district of the United States by the United States marshal thereof. Whenever it appears to the court in which any such action is pending that other parties should be brought before the court in such action, the court may cause such other parties to be summoned from any judicial district of the United States.]

SECTION 9 OF THE FEDERAL NONNUCLEAR ENERGY RESEARCH AND DEVELOPMENT ACT OF 1974

[PATENT POLICY

[SEC. 9. (a) Whenever any invention is made or conceived in the course of or under any contract of the Administration, other than nuclear energy research, development, and demonstration pursuant to the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) and the Administrator determines that—

[(1) the person who made the invention was employed or assigned to perform research, development, or demonstration work and the invention is related to the work he was employed or assigned to perform, or that it was within the scope of his employment duties, whether or not it was made during working hours, or with a contribution by the Government of the use of Government facilities, equipment, materials, allocated funds, information proprietary to the Government, or services of Government employees during working hours; or

[(2) the person who made the invention was not employed or assigned to perform research, development, or demonstration work, but the invention is nevertheless related to the contract or to the work or duties he was employed or assigned to perform, and was made during working hours, or with a contribution from the Government of the sort referred to in clause (1),

title to such invention shall vest in the United States, and if patents on such invention are issued they shall be issued to the United States, unless in particular circumstances the Administrator waives all or any part of the rights of the United States to such invention in conformity with the provisions of this section.

[(b) Each contract entered into by the Administration with any person shall contain effective provisions under which such person shall furnish promptly to the Administration a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation which may be made in the course of or under such contract.

[(c) Under such regulations in conformity with the provisions of this section as the Administrator shall prescribe, the Administrator may waive all or any part of the rights of the United States under this section with respect to any invention or class of inventions made or which may be made by any person or class of persons in the course of or under any contract of the Administration if he de-

termines that the interests of the United States and the general public will best be served by such waiver. The Administration shall maintain a publicly available, periodically updated record of waiver determinations. In making such determinations,the Administrator shall have the following objectives:

[(1) Making the benefits of the energy research, development, and demonstration program widely available to the public in the shortest practicable time.

[(2) Promoting the commercial utilization of such inventions.

[(3) Encouraging participation by private persons in the Administration's energy research, development and demonstration program.

[(4) Fostering competition and preventing undue market concentration or the creation or maintenance of other situations inconsistent with the antitrust laws.

[(d) In determining whether a waiver to the contractor at the time of contracting will best serve the interests of the United States and the general public, the Administrator shall specifically include as considerations—

[(1) the extent to which the participation of the contractor will expedite the attainment of the purposes of the program;

[(2) the extent to which a waiver of all or any part of such rights in any or all fields of technology is needed to secure the participation of the particular contractor;

[(3) the extent to which the contractor's commercial position may expedite utilization of the research, development, and demonstration program results;

[(4) the extent to which the Government has contributed to the field of technology to be funded under the contract;

[(5) the purpose and nature of the contract, including the intended use of the results developed thereunder;

[(6) the extent to which the contractor has made or will make substantial investment of financial resources or technology developed at the contractor's private expense which will directly benefit the work to be performed under the contract;

[(7) the extent to which the field of technology to be funded under the contract has been developed at the contractor's private expense;

[(8) the extent to which the Government intends to further develop to the point of commerical utilization the results of the contract effort;

[(9) the extent to which the contract objectives are concerned with the public health, public safety, or public welfare;

[(10) the likely effect of the waiver on competition and market concentration; and

[(11) in the case of a nonprofit educational institution, the extent to which such institution has a technology transfer capability and program, approved by the Administrator as being consistent with the applicable policies of this section.

[(e) In determining whether a waiver to the contractor or inventor of rights to an identified invention will best serve the interests of the United States and the general public, the Administrator

shall specifically include as considerations paragraphs (4) through (11) of subsection (d) as applied to the invention and—

[(1) the extent to which such waiver is a reasonable and necessary incentive to call forth private risk capital for the development and commercialization of the invention; and

[(2) the extent to which the plans, intentions, and ability of the contractor or inventor will obtain expeditious commercialization of such invention.

[(f) Whenever title to an invention is vested in the United States, there may be reserved to the contractor or inventor—

[(1) a revocable or irrevocable nonexclusive, paid-up license for the practice of the invention throughout the world; and

[(2) the rights to such invention in any foreign country where the United States has elected not to secure patent rights and the contractor elects to do so, subject to the rights set forth in paragraphs (2), (3), (6), and (7) of subsection (h): *Provided,* That when specifically requested by the Administration and three years after issuance of such a patent, the contractor shall submit the report specified in subsection (h)(1) of this section.

* * * * * * *

[(j) The Administrator shall, in granting waivers or licenses, consider the small business status of the applicant.

[(k) The Administrator is authorized to take all suitable and necessary steps to protect any invention or discovery to which the United States holds title, and to require that contrators or persons who acquire rights to inventions under this section protect such inventions.

[(l) The Administration shall be considered a defense agency of the United States for the purpose of chapter 17 of title 35 of the United States Code.

[(m) As used in this section—

[(1) the term "person" means any individual, partnership, corporation, association, institution, or other entity;

[(2) the term "contract" means any contract, grant, agreement, understanding, or other arrangement, which includes research, development, or demonstration work, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder;

[(3) the term "made", when used in relation to any invention, means the conception or first actual reduction to practice of such invention;

[(4) the term "invention" means inventions or discoveries, whether patented or unpatented; and

[(5) the term "contractor" means any person having a contract with or on behalf of the Administration.

[(n) Within twelve months after the date of the enactment of this Act, the Administrator with the participation of the Attorney General, the Secretary of Commerce, and other officals as the President may designate, shall submit to the President and the appropriate congressional committees a report concerning the applicability of existing patent policies affecting the programs under this Act, along with his recommendations for amendments or additions to the statutory patent policy, including his recommendations

on mandatory licensing, which he deems advisable for carrying out the purposes of this Act.]

ADMINISTRATION TREATED AS DEFENSE AGENCY FOR PURPOSES OF SECRECY OF INVENTIONS

SEC. 9. The Administration shall be considered a defense agency of the United States for purposes of chapter 17 of title 35, United States Code.

SECTION 5 OF THE CONSUMER PRODUCT SAFETY ACT

PRODUCT SAFETY INFORMATION AND RESEARCH

SEC. 5. (a) * * *

* * * * * * *

[(d) Whenever the Federal contribution for any information, research, or development activity authorized by this Act is more than minimal, the Commission shall include in any contract, grant, or other arrangement for such activity, provisions effective to insure that the rights to all information, uses, processes, patents, and other developments resulting from that activity will be made available to the public without charge on a nonexclusive basis. Nothing in this subsection shall be construed to deprive any person of any right which he may have had, prior to entering into any arrangement referred to in this subsection, to any patent, patent application, or invention.]

SECTION 3 OF THE ACT OF APRIL 5, 1944

AN ACT Authorizing the construction and operation of demonstration plants to produce synthetic liquid fuels from coal, oil shales, agricultural and forestry products, and other substances, in order to aid the prosecution of the war, to conserve and increase the oil resources of the Nation, and for other purposes

[Sec. 3. The Secretary of the Interior is authorized to grant, on such terms as he may consider appropriate but subject to section 207 of the Federal Property and Administrative Services Act of 1949, licenses under patent rights acquired under this Act: *Provided,* That such licenses are consistent with the terms of the agreements by which such patent rights are acquired. No Patent acquired by the Secretary of the Interior under this Act shall prevent any citizen of the United States, or corporation created under the laws of the United States or any State thereof, from using any invention, discovery, or process covered by such patent, or restrict such use by any such citizen or corporation, or be the basis of any claim against any such person or corporation on account of such use.]

SOLID WASTE DISPOSAL ACT

TITLE II—SOLID WASTE DISPOSAL

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Subtitle H—Research, Development, Demonstration, and Information

RESEARCH, DEMONSTRATIONS, TRAINING, AND OTHER ACTIVITIES

SEC. 8001. (a) GENERAL AUTHORITY.—* * *

* * * * * * *

(c) AUTHORITIES.—(1) In carrying out subsection (a) of this section respecting solid waste research, studies, development, and demonstration, except as otherwise specifically provided in section 8004(d), the Administrator may make grants to or enter into contracts (including contracts for construction) with, public agencies and authorities or private persons.

(2) Contracts for research, development, or demonstrations or for both (including contracts for construction) shall be made in accordance with and subject to the limitations provided with respect to research contracts of the military departments in title 10, United States Code, section 2353, except that the determination, approval, and certification required thereby shall be made by the Administrator.

[(3) Any invention made or conceived in the course of, or under, any contract under this Act shall be subject to section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974 to the same extent and in the same manner as inventions made or conceived in the course of contracts under such Act, except that in applying such section, the Environmental Protection Agency shall be substituted for the Energy Research and Development Administration and the words "solid waste" shall be substituted for the word "energy" where appropriate.]

(4) For carrying out the purpose of this Act the Administrator may detail personnel of the Environmental Protection Agency to agencies eligible for assistance under this section.

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FULL-SCALE DEMONSTRATION FACILITIES

SEC. 8004. (a) AUTHORITY.—* * *

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(c) COST SHARING.—Whenever practicable, in constructing, operating, or providing financial assistance under this subtitle to a full-scale demonstration facility, the Administrator shall endeavor to enter into agreements and make other arrangements for maximum practicable cost sharing with other Federal, State, and local agencies, private persons, or any combination thereof.

(2) The Administrator shall enter into arrangements, wherever practicable and desirable, to provide monitoring of full-scale solid waste facilities (whether or not constructed or operated under this Act) for purposes of obtaining information concerning the performance, and other aspects, of such facilities. Where the Administrator provides only monitoring and evaluation instruments or personnel (or both) or funds for such instruments or personnel and provides no other financial assistance to a facility, [notwithstanding section

8001(c)(3),] title to any invention made or conceived of in the course of developing, constructing, or operating such facility shall not be required to vest in the United States and patents respecting such invention shall not be required to be issued to the United States.

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TITLE 35, UNITED STATES CODE

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PART II—PATENTABILITY OF INVENTIONS AND GRANT OF PATENTS

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CHAPTER 18—PATENT RIGHTS IN INVENTIONS MADE WITH FEDERAL ASSISTANCE

Sec.
200. Policy and objective.

* * * * * * *

212. Assignment of title or rights.
213. Disposition of rights in educational awards.

* * * * * * *

§ 201. Definitions

As used in this chapter—

(a) The term "Federal agency" means any executive agency as defined in section 105 of title 5, United States Code, and the military departments as defined by section 102 of title 5, United States Code.

(b) The term "funding agreement" means any contract, grant, or cooperative agrement entered into between any federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal Government. Such term includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as herein defined, *but does not mean any work-for-others agreement or jointly sponsored research arrangement entered into between a private entity person and the operator of a Government-owned, contractor-operated facility.*

(c) The term "contractor" means any person, small business firm, or nonprofit organization that is a party to a funding agreement.

(d) The term "invention" means any invention or discovery which is or may be patentable or otherwise protectable under this title *or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).*

(e) The term "subject invention" means any invention of the contractor conceived or first actually reduced to practice in the performance of work under a funding agreement, *except that in the case of a sexually propagated variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act (7 U.S.C. 2401(d))) must also occur during the period of contract performance.*

* * * * * * *

§ 202. Disposition of rights

(a) Each nonprofit organization or small business firm may, within a reasonable time after disclosure as required by paragraph (c)(1) of this section, elect to retain title to any subject invention: *Provided, however,* That a funding agreement may provide otherwise **[**(i) when the funding agreement is for the operation of a Government-owned research or production facility,**]** *(i) when the contractor is not located in the United States or does not have a place of business located in the United States or is subject to the control of a foreign government,* (ii) in exceptional circumstances when it is determined by the agency that restriction or elimination of the right to retain title to any subject invention will better promote the policy and objectives of this chapter **[**(or iii)**]**, *(iii) when the funding agreement is related to or associated with an international treaty, agreement, memorandum of understanding, or other arrangement with a foreign government including (but not limited to) agreements of cooperation in science and technology or military agreements relating to weapons development or production, and it is determined by the agency that rights in the Government greater than a nonexclusive license are necessary for the agency to fulfill its obligations under the international treaty, agreement, memorandum of understanding, or other arrangement, (iv) when the funding agreement includes the operation of a Government-owned, contractor-operated facility of the Department of Energy primarily dedicated to that Department's naval nuclear propulsion or weapons related programs and all funding agreement limitations under this subparagraph on the contractor's right to elect title to a subject invention are limited to inventions occurring under the above two programs of the Department of Energy, or (v)* when it is determined by a Government authority which is authorized by statute or Executive order to conduct foreign intelligence or counter-intelligence activities that the restriction or elimination of the right to retain title to any subject invention is necessary to protect the security of such activities. The rights of the nonprofit organization or small business firm shall be subject to the provisions of paragraph (c) of this section and the other provisions of this chapter.

(b)(1) Any determination under (ii) of paragraph (a) of this section shall be in writing and accompanied by a written statement of facts justifying the determination. A copy of each such determination and justification shall be sent to the Comptroller General of the United States within thirty days after the award of the applicable funding agreement. In the case of determinations applicable to funding agreements with small business firms copies shall also be

sent to the Chief Counsel for Advocacy of the Small Business Administration.

(2) If the Comptroller General believes that any pattern of determinations by a Federal agency is contrary to the policy and objectives of this chapter or that an agency's policies or practices are otherwise not in conformance with this chapter, the Comptroller General shall so advise the head of the agency. The head of the agency shall advise the Comptroller General in writing within one hundred and twenty days of what action, if any, the agency has taken or plans to take with respect to the matters raised by the Comptroller General.

(3) At least once each year, the Comptroller General shall transmit a report to the Committees on the Judiciary of the Senate and House of Representatives on the manner in which this chapter is being implemented by the agencies and on such other aspects of Government patent policies and practices with respect to federally funded inventions as the Comptroller General believes appropriate.

(4) If the contractor believes that a determination is contrary to the policies and objectives of this chapter or constitutes an abuse of discretion by the agency, the determination shall be subject to section 203(d).

(5) Whenever the Director of the Office of Management and Budget has determined that one or more Federal agencies are utilizing the authority of section 202(a)(ii) in a manner that is contrary to the policies and objectives of this chapter, he may promulgate regulations under section 206 which establish policies, procedures, and guidelines describing classes of situations in which agencies may not exercise the authorities of that section.

(c) Each funding agreement with a small business firm or nonprofit organization shall contain appropriate provisions to effectuate the following:

[(1) A requirement that the contactor disclose each subject invention to the Federal agency within a reasonable time after it is made and that the Federal Government may receive title to any subject invention not reported to it within such time.

[(2) A requirement that the contractor make an election to retain title to any subject invention within a reasonable time after disclosure and that the Federal Government may receive title to any subject invention in which the contractor does not elect to retain rights or fails to elect rights within such time.

[(3) A requirement that a contractor electing rights file patent applications within reasonable times and that the Federal Government may receive title to any subject inventions in the United States or other countries in which the contractor has not filed patent applications on the subject invention within such times.]

(1) A requirement that the contractor disclose each subject invention to the contracting Federal agency within a reasonable time after it becomes known to contractor personnel responsible for the administration of patent matters and that the Federal Government may receive title to any subject invention not disclosed to it within such time.

(2) A requirement that the contractor make a written election within 2 years after disclosure to the Federal agency (or such

additional time as may be approved by the Federal agency) whether the contractor will retain title to a subject invention, except that (A) in any case where publication, on sale, or public use has initiated the one year statutory period in which valid patent protection can still be obtained in the United States, the period for election may be shortened by the Federal agency to a date that is not more than 60 days prior to the end of the statutory period, and (B) the Federal Government may receive title to any subject invention in which the contractor does not elect to retain rights or fails to elect rights within such time.

(3) A requirement that a contractor electing rights in a subject invention agrees to file a patent application prior to any statutory bar date that may occur under this title due to publication, on sale, or public use, and shall thereafter file corresponding patent applications in other countries in which it wishes to retain title within reasonable times, and that the Federal Government may receive title to any subject inventions in the United States or other countries in which the contractor has not filed patent applications on the subject invention within such times.

(4)*(A)* With respect to any invention in which the contractor elects rights, the Federal agency shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any subject invention throughout the world, and may, if provided in the funding agreement, have additional rights to sublicense any foreign government or international organization pursuant to any existing or future treaty or agreement.

(B) The right to require the contractor, inventor, or assignee to license another person to practice a subject invention on reasonable terms if—

(i) such licensing is necessary to permit lawful commercial manufacture, use or sale by a third party of a specified end item of a major, multiyear research and development project of the Department of Energy or the National Aeronautics and Space Administration and such subject invention was made during research and development activities directly funded under that project;

(ii) a similar product or process is not commercially available as a reasonable substitute for the licensing; and

(iii) such right is specified in the contract.

(5) The right of the Federal agency to require periodic reporting on the utilization or efforts at obtaining utilization that are being made by the contractor or his licensees or assignees: *Provided,* That any such information [may] *as well as any information on utilization or efforts at obtaining utilization obtained as part of a proceeding under section 203 of this chapter shall* be treated by the Federal agency as commercial and financial information obtained from a person and privileged and confidential and not subject to disclosure under section 552 of title 5 of the United States Code.

(6) An obligation on the part of the contractor, in the event a United States patent application is filed by or on its behalf or by any assignee of the contractor, to include within the specifi-

cation of such application and any patent issuing thereon, a statement specifying that the invention was made with government support and that the government has certain rights in the invention.

[(7) In the case of a nonprofit organization, (A) a prohibition upon the assignment of rights to a subject invention in the United States without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions and which is not, itself, engaged in or does not hold a substantial interest in other organizations engaged in the manufacture or sale of products or the use of processes that might utilize the invention or be in competition with embodiments of the invention (provided that such assignee shall be subject to the same provisions as the contractor); (B) a prohibition against the granting of exclusive licenses under United States Patents or Patent Applications in a subject invention by the contractor to persons other than small business firms for a period in excess of the earlier of five years from first commercial sale or use of the invention or eight years from the date of the exclusive license excepting that time before regulatory agencies necessary to obtain premarket clearance unless, on a case-by-case basis, the Federal agency approves a longer exclusive license. If exclusive field of use licenses are granted, commercial sale or use in one field of use shall not be deemed commercial sale or use as to other fields of use, and a first commercial sale or use with respect to a product of the invention shall not be deemed to end the exclusive period to different subsequent products covered by the invention; (C) a requirement that the contractor share royalties with the inventor; and (D) a requirement that the balance of any royalties or income earned by the contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, be utilized for the support of scientific research or education.]

(7) In the case of a nonprofit organization—

(A) a requirement that the contractor share royalties with the inventor, and

(B) a requirement that the balance of any royalties or income earned by the contractor with respect to subject inventions, after payments of expenses (including payments to inventors) incidental to the administration of subject investions, be utilized for the support of scientific research or education.

(8) The requirements of sections 203 and 204 of this chapter.

(9) After payment of patenting costs, licensing costs, payments to inventors, and other expenses, the balance of any royalties or income earned on subject inventions by the contractor operating a Government-owned contractor-operated facility (up to a total equal to 5 percent of that facility's annual budget), if the contractor elects to retain such funds, shall be used by such contractor for scientific research, development, and education consistent with the research and development mission and objectives of such facility including activities that increase the li-

censing potential of other inventions of the facility. Any additional royalties and income shall be returned to the Treasury. To the extent that it provides the most effective technology transfer, the licensing of the inventions involved shall be administered by contractor employees on location at the facility.

* * * * * * *

(g)(1) A Federal agency may at any time waive all or any part of the rights of the United States, under sections 202, 203, and 204 of this chapter, to any subject inventions made under a funding agreement or class of funding agreements if the agency determines that the interests of the United States and the general public will be best served thereby including, but not limited to, instances where—

(A) the funding agreement involves cosponsored, cost shared, or joint venture research or development and the contractor or other sponsor or joint venturer is required to make or has made a substantial contribution of funds, facilities, personnel, data, or equipment to the work performed under the funding agreement, or

(B) the conditions justifying acquisition of title by the Government under section 202(a) no longer exist or do not apply in the case of the subject invention.

The agency shall maintain a record, which shall be made public and periodically updated, of determinations made under this paragraph.

(2) In making determinations under paragraph (1)(A) of this subsection, the agency shall consider at least the following objectives:

(A) Encouraging the wide availability to the public of the benefits of Government-sponsored research and development in the shortest practicable time.

(B) Promoting the commercial utilization of inventions made under Government funding agreements.

(C) Encouraging prticipation by highly qualified private persons in Government-sponsored research and development programs.

(D) Fostering competition and preventing the creation or maintenance of situations inconsistent with the antitrust laws.

§ 203. March-in rights

With respect to any subject invention in which a small business firm or nonprofit organization has acquired title under this chapter, the Federal agency under whose funding agreement the subject invention was made shall have the right, in accordance with such procedures as are provided in regulations promulgated hereunder to require the contractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the contractor, assignee, or exclusive licensee refuses such request, to grant such a license itself, if the Federal agency determines that such—

(a) action is necessary because the contractor or assignee has not taken, or is not expected to take within a reasonable time,

effective steps to achieve practical application of the subject invention in such field of use;

(b) action is necessary to alleviate health or safety needs which are not reasonably satisfied by the contractor, assignee, or their licensees;

(c) action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the contractor, assignee, or licensees; or

(d, action is necessary because the agreement required by section 204 has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of its agreement obtained pursuant 204.

A determination pursuant to this section or section 202(b)(1) shall not be subject to the Contract Disputes Act (41 U.S.C. 601 et seq.). An administrative appeals procedure shall be established by regulations promulgated by the Director of the Office and Management and Budget in accordance with section 206. Any contractor, inventor, assignee, or execlusive licensee adversely affected by a determination under this section may, at any time within sixty days after the determination is issued, file an appeal under the appeals procedure established pursuant to the preceding sentence or file a petition in the United States Claims Court, which shall have jurisdiction to determine the matter de novo and to affirm, reverse, or modify as appropriate, the determination of the Federal agency. In cases described in paragraphs (a) and (c), the agency's determination shall be held in abeyance pending the exhauston of appeals or petitions filed under the preceding sentence.

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[§ 206. Uniform clauses and regulations

[The Office of Federal Procurement Policy, after receiving recommendations of the Office of Science and Technology Policy, may issue regulations which may be made applicable to Federal agencies implementing the provisions of sections 202 through 204 of this chapter and the Office of Federal Procurement Policy shall establish standard funding agreement provisions required under this chapter.]

§ 206. Uniform clauses and regulations

The Secretary of Commerce may initiate the regulations and revisions thereto and standard funding agreement provisions, required to implement sections 202 through 204, to be promulgated by the Director of the Office of Management and Budget after full consideration of agency and public comment.

* * * * * * *

§ 212. Assignment of title of rights

Subject to regulations promulgated under section 206, upon a determination that to do so is in the best interests of the Government, an agency may assign title or other rights to an invention to a person where such title or rights are held by the Government under

such terms and conditions as will encourage the domestic commercial use of such technology.

§ 213. Disposition of rights in educational awards

No scholarship, fellowship, training grant, or other funding agreement made by a Federal agency primarily to an awardee for educational purposes will contain any provision giving the Federal agency any rights to inventions made by the awardee.

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STEVENSON-WYDLER TECHNOLOGY INNOVATION ACT OF 1980

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SEC. 6. CENTERS FOR INDUSTRIAL TECHNOLOGY.

(a) ESTABLISHMENT.—* * *

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[(e) RESEARCH AND DEVELOPMENT UTILIZATION.—(1) To promote technological innovation and commercialization of research and development efforts, each Center has the option of acquiring title to any invention conceived or made under the auspices of the Center that was supported at least in part by Federal funds: *Provided,* That—

[(A) the Center reports the invention to the suppporting agency together with a list of each country in which the Center elects to file a patent application on the invention;

[(B) said option shall be exercised at the time of disclosure of invention or within such time thereafter as may be provided in the grant or cooperative agreement;

[(C) the Center intends to promote the commercialization of the invention and file a United States patent application;

[(D) royalities be used for compensation of the inventor or for educational or research activities of the Center;

[(E) the Center make periodic reports to the supporting agency, and the supporting agency may treat information contained in such reports as privileged and confidential technical, commercial, and financial information and not subject to disclosures under the Freedom of Information Act; and

[(F) any Federal department or agency shall have the royalty-free right to practice, or have practiced on its behalf, the invention for governmental purposes.

The supporting agency shall have the right to acquire title to any patent on an invention in any country in which the Center elects not to file a patent application or fails to file within a reasonable time.

[(2) Where a Center has retained title to an invention under paragraph (1) of this subsection the supporting agency shall have the right to require the Center or its licensee to grant a nonexclusive, partially exclusive, or exclusive license to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, if the supporting agency determines, after public notice and opportunity for hearing, that such action is necessary—

[(A) because the Center or licensee has not taken and is not expected to take timely and effective action to achieve practical application of the invention;

[(B) to meet health, safety, environmental, or national security needs which are not reasonably satisfied by the contractor or licensee; or

[(C) because the granting of exclusive rights in the invention has tended substantially to lessen competition or to result in undue market concentration in the United States in any line of commerce to which the technology relates.

[(3) Any individual, partnership, corporation, association, institution, or other entity adversely affected by a support agency determination made under paragraph (2) of this subsection may, at any time within 60 days after the determination is issued, file a petition to the United States Court of Claims which shall have jurisdiction to determine that matter de novo and to affirm, reserve, or modify as appropriate, the determination of the supporting agency.]

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SECTION 10 OF THE ACT OF JUNE 29, 1935

AN ACT To provide for further research into basic laws and principles relating to agriculture and to improve and facilitate the marketing and distribution of agricultural products

SEC. 10. (a) In order to carry out further research on utilization and associated problems in connection with the development and application of present, new, and extended uses of agricultural commodities and products thereof authorized by section 1 of this title, and to disseminate information relative thereto, and in addition to all other appropriations authorized by this title, there is hereby authorized to be appropriated the following sums:

(1) $3,000,000 for the fiscal year ending June 30, 1947, and each subsequent fiscal year.

(2) An additional $3,000,000 for the fiscal year ending June 30, 1948, and each subsequent fiscal year.

(3) An additional $3,000,000 for the fiscal year ending June 30, 1949, and each subsequent fiscal year.

(4) An additional $3,000,000 for the fiscal year ending June 30, 1950, and each subsequent fiscal year.

(5) An additional $3,000,000 for the fiscal year ending June 30, 1951, and each subsequent fiscal year.

(6) In addition to the foregoing, such additional funds beginning with the fiscal year ending June 30, 1952, and thereafter, as the Congress may deem necessary.

The Secretary of Agriculture, in accordance with such regulations as he deems necessary, and when in his judgment the work to be performed will be carried out more effectively, more rapidly, or at less cost than if performed by the Department of Agriculture, may enter into contracts with such public or private organizations or individuals as he may find qualified to carry on work under this section without regard to the provisions of section 3709, Revised Statutes, and with respect to such contracts he may make advance

progress or other payments without regard to the provisions of section 3648, Revised Statutes. Contracts hereunder may be made for work to continue not more than four years from the date of any such contract. Notwithstanding the provisions of section 5 of the Act of June 20, 1874, as amended (31 U.S.C. 713), any unexpended balances of appropriations properly obligated by contracting with an organization as provided in this subsection may remain upon the books of the Treasury for not more than five fiscal years before being carried to the surplus fund and covered into the Treasury. Research authorized under this subsection shall be conducted so far as practicable at laboratories of the Department of Agriculture. Projects conducted under contract with public and private agencies shall be supplemental to and coordinated with research of these laboratories. [Any contracts made pursuant to this authority shall contain requirements making the results of research and investigations available to the public through dedication, assignment to the Government, or such other means as the Secretary shall determine.]

SECTION 427 OF THE FEDERAL MINE SAFETY AND HEALTH ACT OF 1977

SEC. 427. (a) The Secretary of Health, Education, and Welfare is authorized to enter into contracts with, and make grants to, public and private agencies and organizations and individuals for the construction, purchase, and operation of fixed-site and mobile clinical facilities for the analysis, examination, and treatment of respiratory and pulmonary impairments in active and inactive coal miners. The Secretary shall coordinate the making of such contracts and grants with the Appalachian Regional Commission.

(b) The Secretary of Health, Education, and Welfare shall initiate research within the National Institute of Occupational Safety and Health, and is authorized to make research grants to public and private agencies and organizations and individuals for the purpose of devising simple and effective tests to measure, detect, and treat respiratory and pulmonary impairments in active and inactive coal miners. [Any grant made pursuant to this subsection shall be conditioned upon all information, uses, products, processes, patents, and other developments resulting from such research being available to the general public, except to the extent of such exceptions and limitations as the Secretary of Health, Education, and Welfare may deem necessary in the public interest.]

(c) There is hereby authorized to be appropriated for the purpose of subsection (a) of this section $10,000,000 for each fiscal year. There are hereby authorized to be appropriated for the purposes of subsection (b) of this section such sums as are necessary.

SECTION 306 OF THE SURFACE MINING CONTROL AND RECLAMATION ACT OF 1977

MISCELLANEOUS PROVISIONS

SEC. 306. (a) The Secretary of the Interior shall obtain the continuing advice and cooperation of all agencies of the Federal Government concerned with mining and mineral resources, of State and local governments, and of private institutions and individuals to assure that the programs authorized in this title will supplement and not duplicate established mining and minerals research programs, to stimulate research in otherwise neglected areas, and to contribute to a comprehensive nationwide program of mining and minerals research, having due regard for the protection and conservation of the environment. The Secretary shall make generally available information and reports on projects completed, in progress, or planned under the provisions of this title, in addition to any direct publication of information by the institutes themselves.

(b) Nothing in this title is intended to give or shall be construed as giving the Secretary of the Interior any authority over mining and mineral resources research conducted by any agency of the Federal Government, or as repealing, superseding, or diminishing existing authorities or responsibilities of any agency of the Federal Government to plan and conduct, contract for, or assist in research in its area of responsibility and concern with mining and mineral resources.

(c) Contracts or other arrangements for mining and mineral resources research work authorized under this title with an institute, educational institution, or nonprofit organization may be undertaken without regard to the provisions of section 3684 of the Revised Statutes (31 U.S.C. 529) when, in the judgment of the Secretary of the Interior, advance payments of initial expense are necessary to facilitate such work: *Provided,* That authority to make payments under this subsection shall be effective only to such extent or in such amounts as are provided in advance by appropriations Acts.

(d) [No research, demonstration, or experiment shall be carried out under this Act by an institute financed by grants under this Act, unless all uses, products, processes, patents, and other developments resulting therefrom, with such exception or limitation, if any, as the Secretary may find necessary in the public interest, be available promptly to the general public. Nothing contained in this section shall deprive the owner of any background patent relating to any such activities of any rights which that owner may have under that patent.] There are authorized to be appropriated such sums as are necessary for the printing and publishing of the results of activities carried out by institutes under the provisions of this Act and for administrative planning and direction, but such appropriations shall not exceed $1,000,000 in any fiscal year: *Provided,* That no new budget authority is authorized to be appropriated for fiscal year 1977.

SECTION 21 OF THE FEDERAL FIRE PREVENTION AND CONTROL ACT OF 1974

ADMINISTRATIVE PROVISIONS

SEC. 21. (a) ASSISTANCE.—* * *

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[(d) INVENTIONS AND DISCOVERIES.—All property rights with respect to inventions and discoveries, which are made in the course of or under contract with any government agency pursuant to this Act, shall be subject to the basic policies set forth in the President's Statement of Government Patent Policy issued August 23, 1971, or such revisions of that statement of policy as may subsequently be promulgated and published in the Federal Register.]

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SECTION 6 OF THE SOLAR PHOTOVOLTAIC ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION ACT OF 1978

SEC. 6. (a) The Secretary is authorized to select on the basis of open competitions—

(1) a number of readily available photovoltaic components and systems;

(2) a number of design concepts for various types of applications which demonstrate adaptability to the utilization of photovoltaic components and systems; and

(3) a number of designs for applications selected under paragraph (2), so that each design includes specific provisions for the utilization of solar photovoltaic components and systems selected under paragraph (1).

(b) The Secretary, in accordance with the applicable provisions of sections 7, 8, and 9 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5901 et seq.) *as amended* and with such program guidelines as the Secretary may establish, shall—

(1) enter into such contracts and grants as may be necessary or appropriate for the development for commercial production and utilization of photovoltaic components and systems, including any further planning and design which may be required to conform with the specifications set forth in any applicable criteria;

(2) select, as being compatible with the design concepts chosen under subsection (a)(2) of this section, a reasonable number of photovoltaic components and systems; and

(3) enter into contracts with a number of persons or firms for the procurement of photovoltaic components and systems, including adequate numbers of spare and replacement parts for such systems.

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SECTION 12 OF THE CRITICAL AGRICULTURAL MATERIALS ACT

[SEC. 12. Relative to the definitions of, title to, and licensing of inventions made or conceived in the course of or under any contract or grant pursuant to this Act, and notwithstanding any other provisions of law, the provisions of sections 9 and 10 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5908–9) shall govern.]

SECTION 109 OF THE WATER RESOURCES RESEARCH ACT OF 1984

[SEC. 109. Notwithstanding any other provision of law, the Secretary shall be governed by the provisions of sections 9 (except subsections (l) and (n)) and 10 of the Federal Nonnuclear Energy, Research, and Development Act of 1974 (Public Law 93–577; 88 Stat. 1887, 1891; 42 U.S.C. 5908–5909) with respect to patent policy and to the definition of title to and licensing of inventions made or conceived in the course of work performed, or under any contract or grant made, pursuant to this Act. Subject to such patent policy, all research or development contracted for, sponsored, cosponsored, or authorized under authority of this Act shall be provided in such manner that all information, data, and know-how, regardless of their nature or mediums, resulting from such research and development shall (with such exceptions and limitations, if any, as the Secretary may find to be necessary in the interest of national defense) be usefully available for practice by the general public.]

ADDITIONAL VIEWS OF HON. HERBERT H. BATEMAN

I strongly believe that this Committee should have deleted the authority, contained in Section 301(c)(6) of this Bill, that permits the retention by Government-owned, Contractor-operated (GOCO) facilities of a percentage of the royalties earned on an invention. This provision usurps the Congressional budgetary process and will create budgetary uncertainties for these facilities.

Section 301(c)(6) permits a GOCO to retain the balance of any royalties or income earned on an invention, after payment of patenting costs, licensing costs, and other expenses, up to 5 percent of a GOCO's annual budget. This ability to retain royalties earned on an invention is not mandatory, but rather a decision to be made by the facility. The royalties may be used by a GOCO for scientific research, development, and education consistent with the research and development mission and objectives of the facility. Any royalties earned that exceed the 5 percent ceiling are to be returned to the general Treasury.

The retention of royalties by a GOCO will permit the Laboratory to override any programmatic reductions imposed by Congress. Congress must, through its budgetary process, be ultimately responsible and accountable to the taxpayers for the research funding priorities of this nation. If a Laboratory Director is able to override these Congressional determinations, regardless of the merits involved, this accountability will be lost. If a "slush fund" is needed by these facilities, it is the responsibility of the Congress to authorize and appropriate the necessary funds, thereby retaining accountability for its expenditure in the Congress where it belongs.

It is an anomaly that the Committee approved version included changes that made it discretionary with the GOCO's whether they retained royalties or not. This was because some government labs fear retention of royalty income will lead to Congress reducing the appropriation they would otherwise receive.

Congress should not forgo its authority and duty to determine priorities and spending levels of federal agencies.

HERBERT H. BATEMAN.

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